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Rybczynski on Parametrics 150 **Is China Ready to Burst?** 122
AIA Honor Awards 171 **The Fabulous Mrs. D** 188 **Rural Studio** 258

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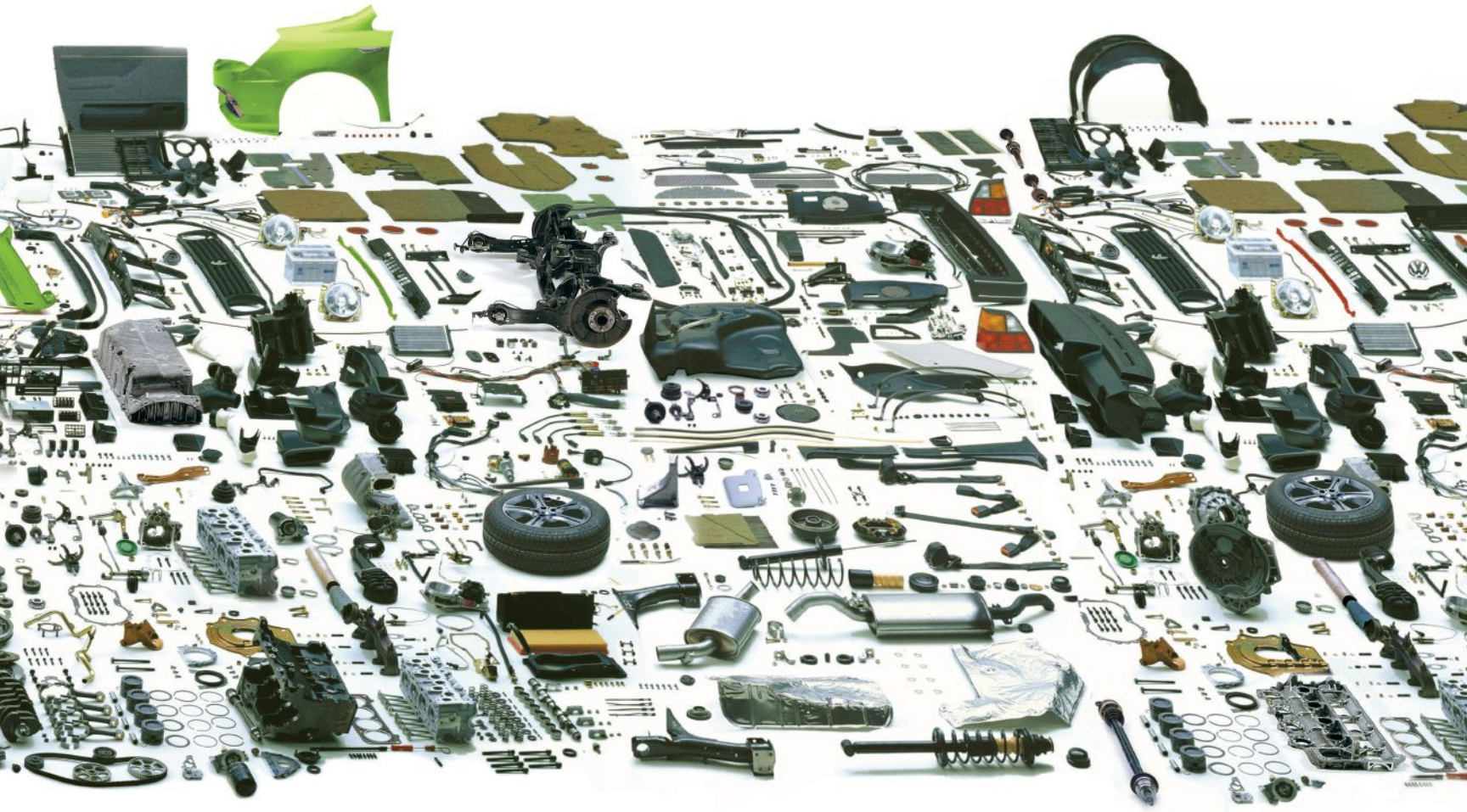

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CONTENTS

Tod Williams and Billie Tsien, whose firm received the 2013 AIA Architecture Firm Award.

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172 THE COLOSSUS
Thom Mayne has made the transition from enfant terrible to elder statesman without losing his grip on surreality.

180 WE TWO
Tod Williams and Billie Tsien have built their practice not on a signature style, but on signature values.

188 THE LADY & THE PIANO
The astonishing architecture of the Menil Collection is a monument to Dominique de Menil, one of the great design patrons of the 20th century.

197 INSTITUTE HONOR AWARDS
Twenty-eight winning projects got the nod in the categories of Architecture, Interior Architecture, and Regional and Urban Design.

247 OTHER AIA AWARDS OF NOTE
The recipients of the Institute's Whitney M. Young Jr. Award, Topaz Medallion, Thomas Jefferson Awards for Public Architecture, Young Architects Awards, Associates Awards, and Collaborative Achievement Awards.

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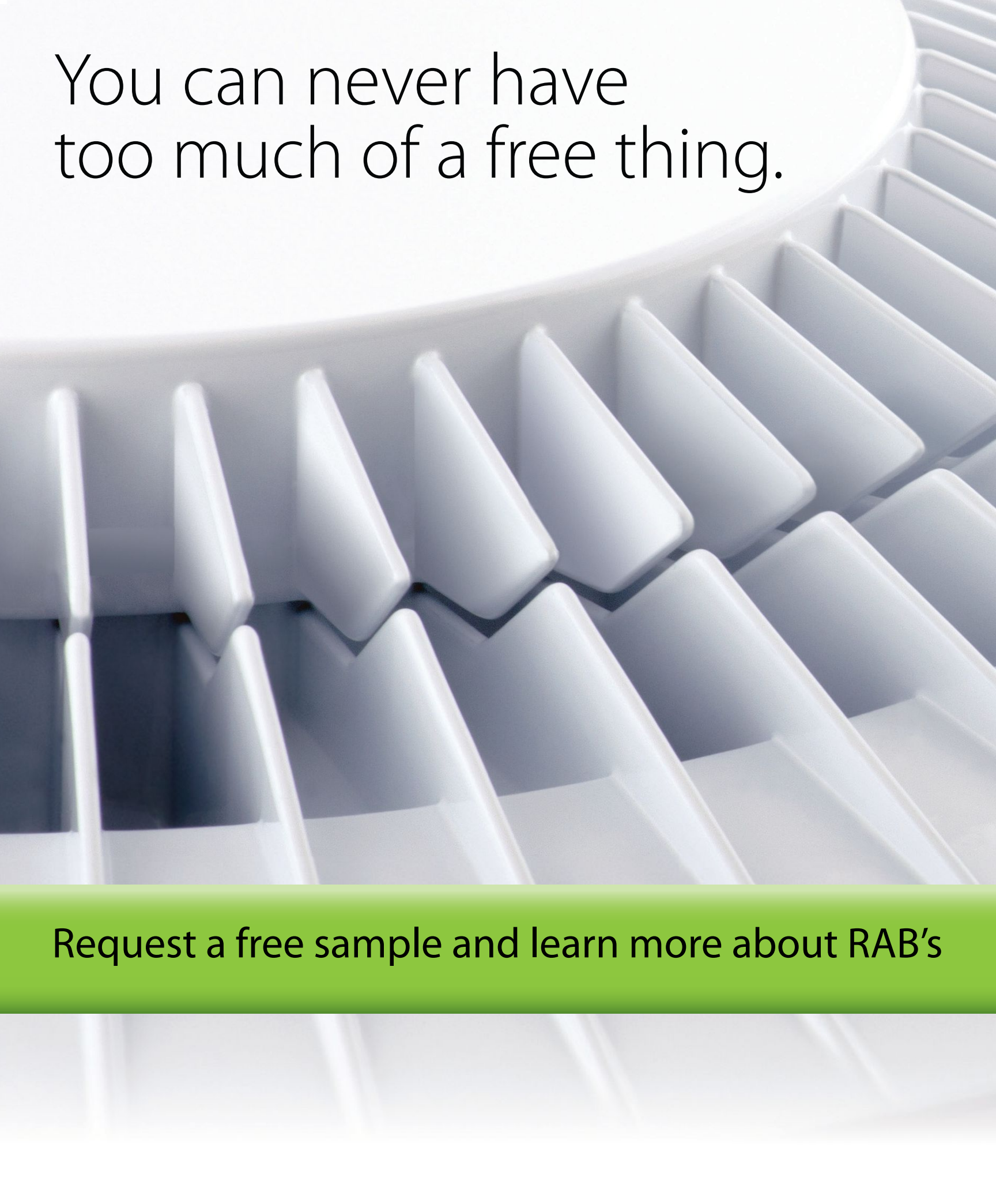
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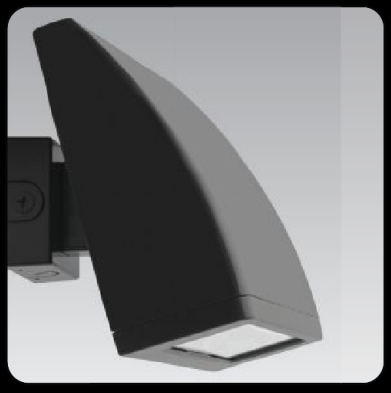

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258 NEWBERN TOWN HALL
With the opening of a new town hall in Newbern, Ala., the Rural Studio completes a civic campus nearly a decade in the making.

266 SAMSUNG MODEL HOME GALLERY
To realize this new housing showcase in Seoul, Nader Tehrani of Boston-based NADAAA developed a new way of designing and building.

278 BAUSCH + LOMB HEADQUARTERS
Emerging firms 137Kilo Architects and Beza Projekt create an open-plan office that gives Warsaw a new model of workplace freedom.

284 EXPLORATORIUM
San Francisco's beloved hands-on museum moves to a pair of piers reimagined by EHDD for the next generation of science geeks.

294 JAMES B. HUNT JR. LIBRARY
Snøhetta's aluminum-and-glass contribution to the North Carolina State University campus is anything but quiet.

NADAAA's Samsung Model Home Gallery

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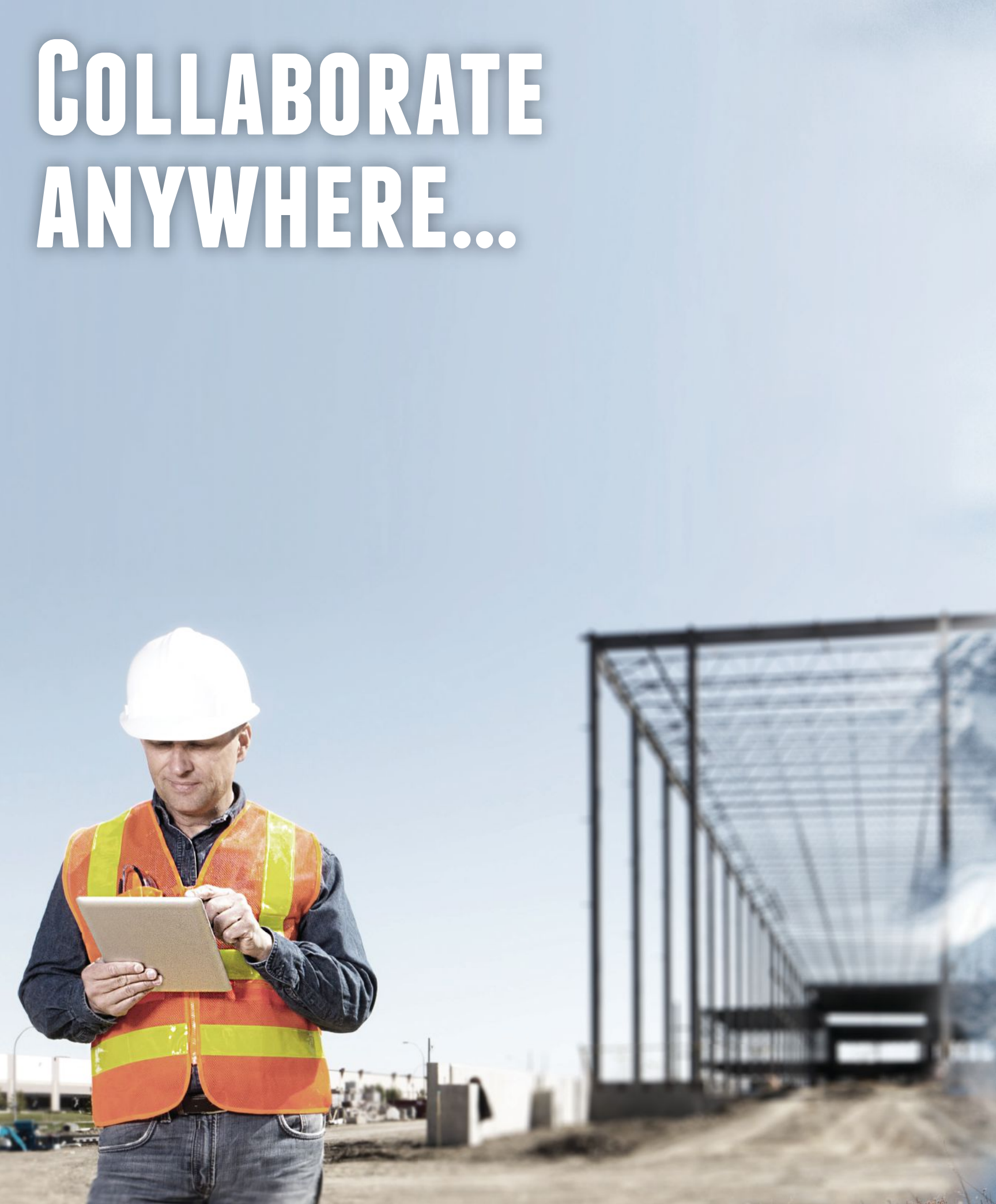

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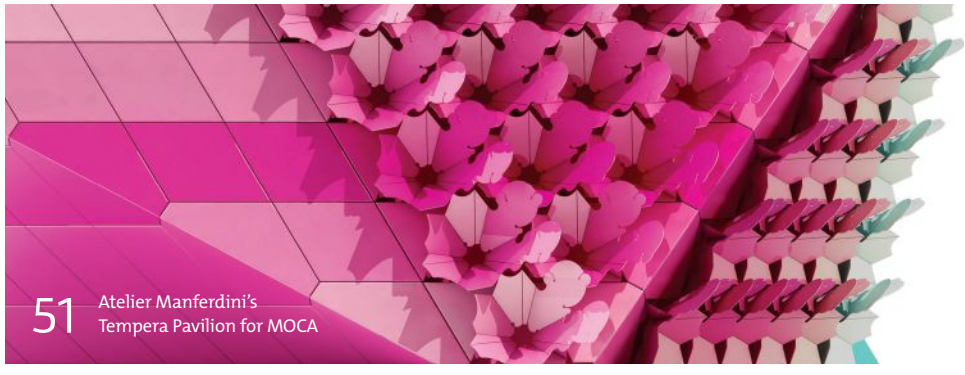
89 This is Antarctica



51 Atelier Manferdini's Tempera Pavilion for MOCA

FRONT

34 DIALOGUE
Washington, D.C., officials want to "renovate" Harry Weese's Metro stations.

51 FRONT
ARO restores Donald Judd's SoHo digs, LEED hits roadblocks, BIG versus OMA, pricing Zumthor's LACMA redo, GSD's new director, and more ...

75 AIARCHITECT
Denver's dean talks mentorship, the mile-high city inspired Woody Allen, design competitions thrive, and repositioning the profession.

89 PRODUCTS
Healthcare products that help heal but don't break the bank, designing for extreme environments, picking the right apps, a versatile acoustical shell, designing with biology, and lots of new products.

CENTER

122 BUILDING ON EMPTY
China's ghost cities raise fears that its inflated real estate market is ready to burst.

136 UNCONTAINED
Colorado's Studio H:T refuses to be typecast.

142 GARDEN VARIETY DISPUTE
The movement to rebuild a rightfully grand Penn Station seems to be gathering momentum.

150 LOST AMID THE ALGORITHMS
Parametric design's real potential—to improve building performance—remains unrealized.

160 COLLABORATION STATION
ARCHITECT's publisher moves from print to digital with a new office space designed by Höweler + Yoon Architecture.

BACK

320 Past Progressives
The Warm Mineral Springs Motel captures the fantastic quality of Victor Lundy's early work.

TOP: JAMES MORRIS

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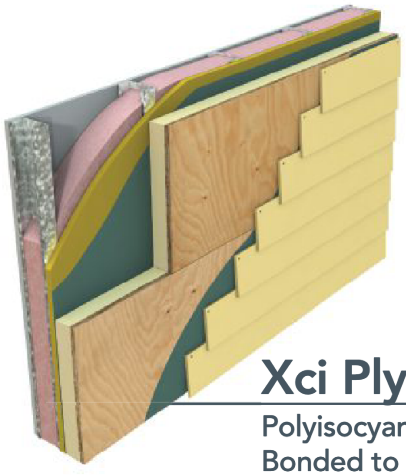

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EDITOR-IN-CHIEF
Ned Cramer, Assoc. AIA
ncramer@hanleywood.com

MANAGING EDITOR
Greig O'Brien
gobrien@hanleywood.com

ART DIRECTOR
Robb Ogle
rogle@hanleywood.com

DESIGN AND TECHNOLOGY

SENIOR EDITOR, DESIGN
Katie Gerfen
kgerfen@hanleywood.com

ASSOCIATE EDITOR, TECHNOLOGY
Wanda Lau
wlau@hanleywood.com

ASSISTANT EDITOR, DESIGN
Deane Madsen, Assoc. AIA
dmadsen@hanleywood.com

MULTIMEDIA

VIDEO PRODUCTION MANAGER
Kaitlyn Rossi
kauchincloss@hanleywood.com

COLUMNS AND FEATURES

SENIOR EDITOR, FEATURES
Eric Wills
ewills@hanleywood.com

ONLINE

SENIOR EDITOR, ONLINE
Kriston Capps
kcapps@hanleywood.com

ASSOCIATE EDITOR, ONLINE
Lindsey M. Roberts
lmroberts@hanleywood.com

SENIOR WEB PRODUCER
Armando Manzanares
amanzanares@hanleywood.com

ART

SENIOR GRAPHIC DESIGNER
Melissa Meyers
mmeyers@hanleywood.com

GRAPHIC DESIGNER
Jessica Rubenstein
jrubenstein@hanleywood.com

COPY AND RESEARCH

QA/COPY EDITOR
Alexandra Rice
arice@hanleywood.com

COPY EDITOR
Christy Goodman

PRODUCTS

Jennifer Brite
products@architectmagazine.com

CONTRIBUTING EDITORS
Aaron Betsky; Blaine Brownell, AIA; Elizabeth Evitts Dickinson; John Morris Dixon, FAIA; Thomas Fisher, Assoc. AIA; Joseph Giovannini; Cathy Lang Ho; Vernon Mays; Mimi Zeiger

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Ron Spink
rspink@hanleywood.com 202.736.3431

EDITORIAL DIRECTOR
Ned Cramer, Assoc. AIA
ncramer@hanleywood.com

GROUP PUBLISHER
Dan Colunio
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ADVERTISING

REGIONAL SALES MANAGER, NORTHEAST, SOUTH CENTRAL
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ACCOUNT MANAGER, CANADA
Colleen T. Curran
ctcurran@yorkmedia.net
416.598.0101, ext. 230

REGIONAL SALES MANAGER, CHINA, HONG KONG, TAIWAN
Judy Wang
judywang2000@yahoo.cn
0086.10.64639193

REGIONAL SALES MANAGER, UNITED KINGDOM, EUROPE
Stuart Smith
stuart.smith@globalmedia sales.co.uk
44.020.8464.5577

REGIONAL SALES MANAGER, DIGITAL MEDIA
Adam Mowrey
amowrey@hanleywood.com
724.612.9319

GROUP PUBLISHING SUPPORT MANAGER
Angie Harris
aharris@hanleywood.com

INSIDE SALES

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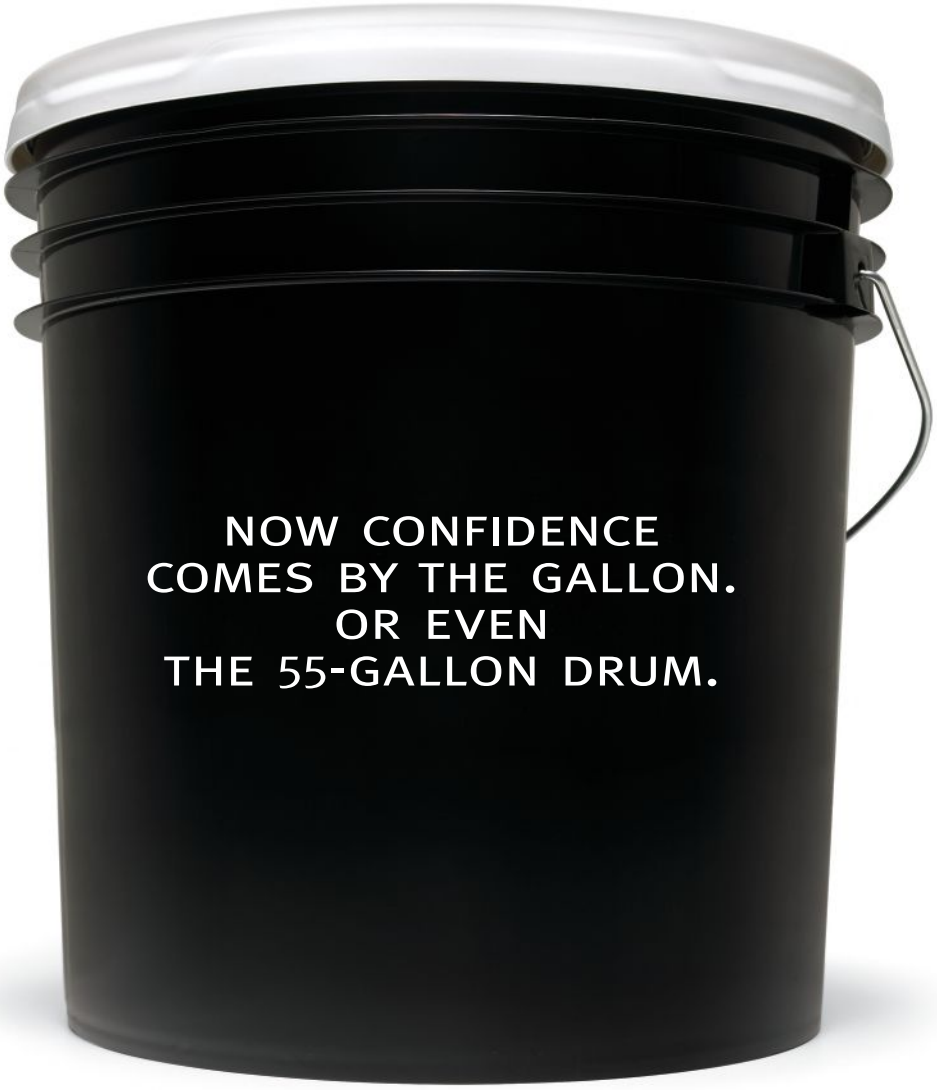

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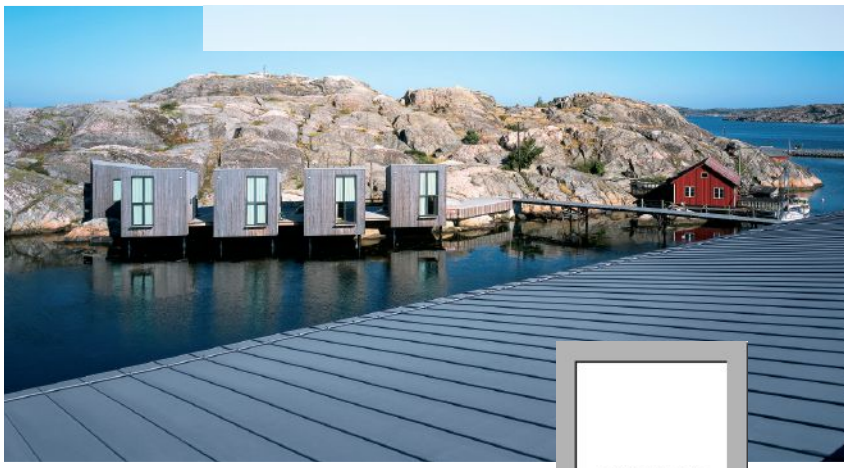

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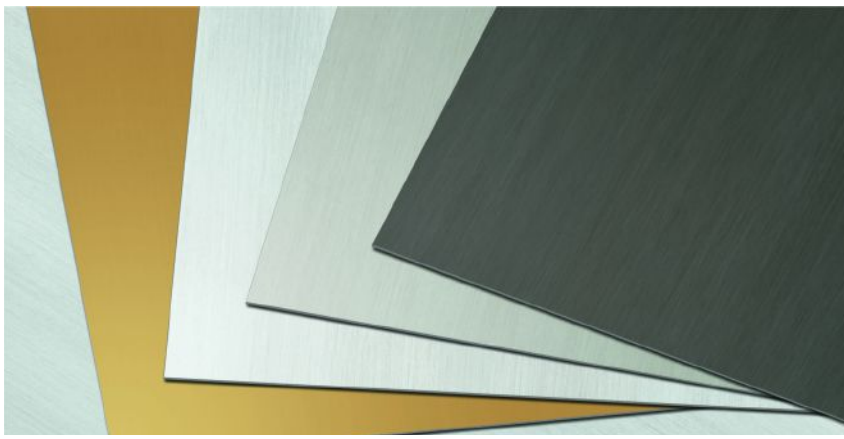

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DIALOGUE

THE EISENHOWER AND MoMA SCRAPS HAVE GARNERED WIDESPREAD MEDIA ATTENTION, BUT THE METRO SITUATION HAS YET TO EMERGE AS A CAUSE CÉLÈBRE.

WHEN BRIGHTER ISN'T BETTER

HARRY WEESE'S D.C. METRO STATIONS ARE IN DANGER OF INSENSITIVE RENOVATION. IF CHANGES REALLY ARE NECESSARY, DON'T THESE MODERN LANDMARKS DESERVE THE BEST?

THE COURT of architectural opinion has had a full docket lately. A recent major outcry caused New York's Museum of Modern Art to reconsider its decision to demolish the American Folk Art Museum building. (Huzzah!) Frank Gehry's scheme for the Eisenhower Memorial in Washington, D.C., remains under partisan attack. (Sigh.) And, less prominently, but no less importantly, public pressure has caused the Washington Metropolitan Area Transit Authority, or Metro, to dial back an ill-advised proposal to revamp its Harry Weese–designed stations around the capital (see page 54).

The Eisenhower and MoMA scraps have garnered widespread media attention, but the Metro situation has yet to emerge as a cause célèbre. This is unfortunate because Weese's grandly vaulted stations are no less than a national treasure—and arguably the most important postwar architecture in Washington. Any alterations to them should be undertaken with great care and under close scrutiny. The stations have suffered too many aesthetic indignities during their decades of service, including the addition of ugly and confusing ticket vending machines as well as functionally important but poorly integrated "bumpy" warning tiles along the platform edges.

Metro's in-house architect Ivailo Karadimov, AIA, revealed the latest plan in April. His mandate arose in part from rider complaints about dim interior lighting. "Karadimov proposed a number of changes," *The Washington Post* reports:

> Stronger lights would be added atop the pylons. A line of lights along the center rib of the ceiling would be added on the mezzanine level ... Lighting along the outside wall beside the tracks currently requires eight-foot-long fluorescent bulbs that are difficult to clean and obsolete enough that Metro has begun to stockpile them. Shorter, newer bulbs could be simply hosed down. "What's happening now is they don't clean them, they just replace them," Karadimov said.

Weese purposefully made the station lighting soft to create a countervailing sense of intimacy in his enormous underground spaces. The currently inadequate light levels seem less the fault of Weese's concept, however, and more a matter of poor maintenance. According to one Metro spokesperson, the situation could be improved, and perhaps resolved entirely, with more frequent cleaning, repair, and replacement of existing lamps and fixtures—along with a few judicious upgrades in technology.

But Karadimov wanted to go further, and attempt to brighten the stations through architectural modifications. He would have replaced Weese's curved concrete railings with glass, bronze hardware with stainless, and the signature brown paint of the signage with brighter colors. These moves wouldn't make the stations better—just a little more trendy.

The 1920s and '30s saw the robust architecture of what Lewis Mumford called "The Brown Decades" fall out of fashion. Masterworks by Frank Furness, H.H. Richardson, and Louis Sullivan were mindlessly altered or needlessly demolished for violating a transitory standard of good taste. Now it's Weese's turn. (And Bud Goldberg's. And Paul Rudolph's.)

Granted, not all postwar architecture was created equal. I eagerly await the demolition of New York's Madison Square Garden, for instance (see page 142). But the preservation of Weese's stations should be a national priority. While Metro appears to have backed down from aspects of Karadimov's plan, alterations are still in the works. (Gulp.)

A commission of such import must be entrusted to the most sensitive and inventive design talents possible. Metro should pause, reboot, and tap expert advisers to find the right architects, through an open selection process. If you agree, speak up. Only our collective voices can make it so.

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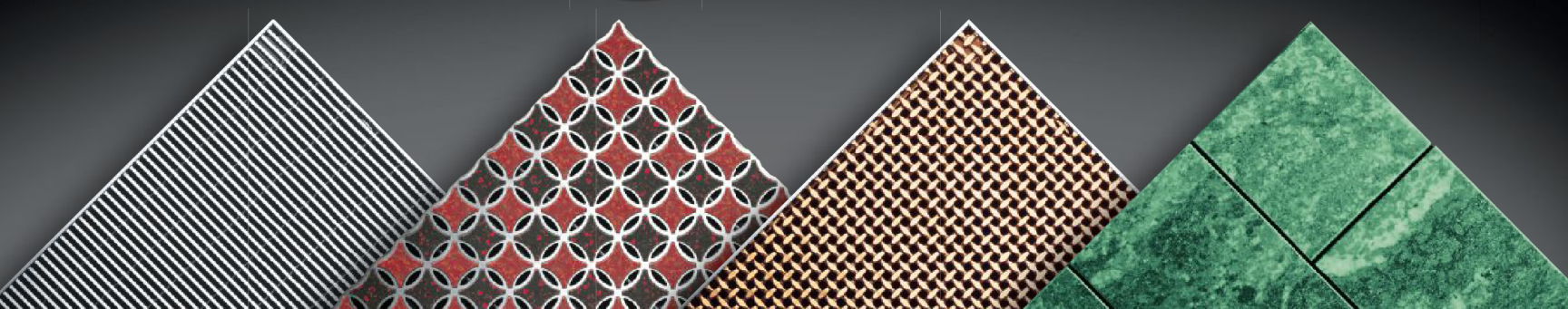

LETTERS

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Lego Has a Gender Problem, Online

If you think Legos are useful for girls, first get girls interested in playing with them. My wife and I are both architects. My daughter revels in her femininity, yet races boys to pick up bugs. She wasn't all that interested in Legos until they came out with the "Friends" line. Reality is a tough thing to rail against. I say work with nature, not against it.

No Apologies for Cooper Union, Online

Cooper Union is not the "canary in the coal mine" of today's higher education dilemma, but one of the many "fat ladies singing." The monumental hubris behind the "new building" is the same one that undermined CU's general financial solvency. The boards of many private institutions, as well as the chancellors and administrators of many public ones, are complicit in the demise of affordable higher education in the U.S. The short-sighted, ill-conceived additions to California's university and college system are testament to the same misguided impulse and direction that has, for all intensive purposes, destroyed the far-sighted promise that was once Cooper Union.

In Stone and Bronze, a Memorial Changes Course, Eisenhower Memorial, Online

Even more money for an architect who was not chosen by the people of a "free country," but rather by an exclusionary "club" behind closed doors. A competition, open to all U.S. citizens, should have been, and still should be, held to select a winning design. GERALD FROSBURG

The Case for Modernism, Online

What happened to the idea of flexible space? Oh, it dissolved in the electrolytic egos of starchitects. Maybe the American Folk Art Museum should be viewed as a temporary "installation" in the great history museum that is New York. Why did the Folk MoMA fail? I'd wager a few bucks that it's the result of an ego-fest involving benefactors, building committees, curators, and architects. GARY COLLINS

Corrections:
On page 60 in our April issue, the image for LiteControl's Wall/Slot 6000 WS-L60 Recessed Perimeter was incorrectly displayed with the entry for Finelite. In the same story, the product name, description, and image of Finelite's Series X2-O luminaire were incorrect. Above is the correct image.

Also in our April issue, Lara Swimmer's name was misspelled on pages 6 and 64.

We regret the errors.

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APRIL RABKIN

APRIL RABKIN has been studying, working, and writing in Beijing since 1998. As a contributor to *Fast Company*, she has also reported from India and Afghanistan.

Rabkin first traveled to Inner Mongolia's ghost city of Kangbashi in 2009 with support of a Middlebury Environmental Journalism Fellowship, and returned four years later for her China real-estate bubble story on page 122 of this month's issue.

Rabkin was the winner of the 2012 Osborn Elliott Prize for Excellence in Journalism on Asia, which she earned for a three-part *Fast Company* story focusing on China's rapidly changing society, including a profile of billionaire recycling tycoon Chen Guangbiao.

ROBB OGLE

ROBB OGLE is the art director of ARCHITECT.

Ogle was raised in Pennsylvania by historic preservationists. He started his education in Savannah, Ga., and received a bachelor's degree in fine arts from The Art Institute of Boston in 2003. Ogle co-founded Prank Design before joining the Font Bureau, where he worked as a graphic designer for five years. He also taught typography in Boston.

Publication design took Ogle to New York and Germany with teNeues, and, later, Ontario, Canada, with TC Media. He currently marvels at architects' ability to think and create in three dimensions.

"Robb" with two 'b's is neither a shortened "Robert" nor an affectation.

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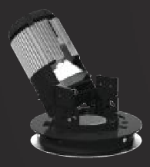
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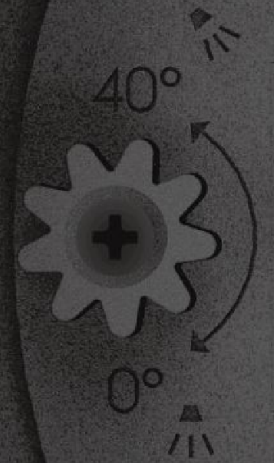

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MELISSA MEYERS

MELISSA MEYERS is a senior graphic designer for ARCHITECT, where she works with photographers and illustrators to make the magazine shine. Her first experience with architecture came at age 5, when her dad taught her how to use a hammer while he designed and built their home in Grand Rapids, Minn.

Meyers graduated from the Art Institutes International Minnesota before moving to Virginia to pursue a career in design. Prior to joining ARCHITECT, Meyers worked in advertising, where she won numerous awards for her public service campaign work.

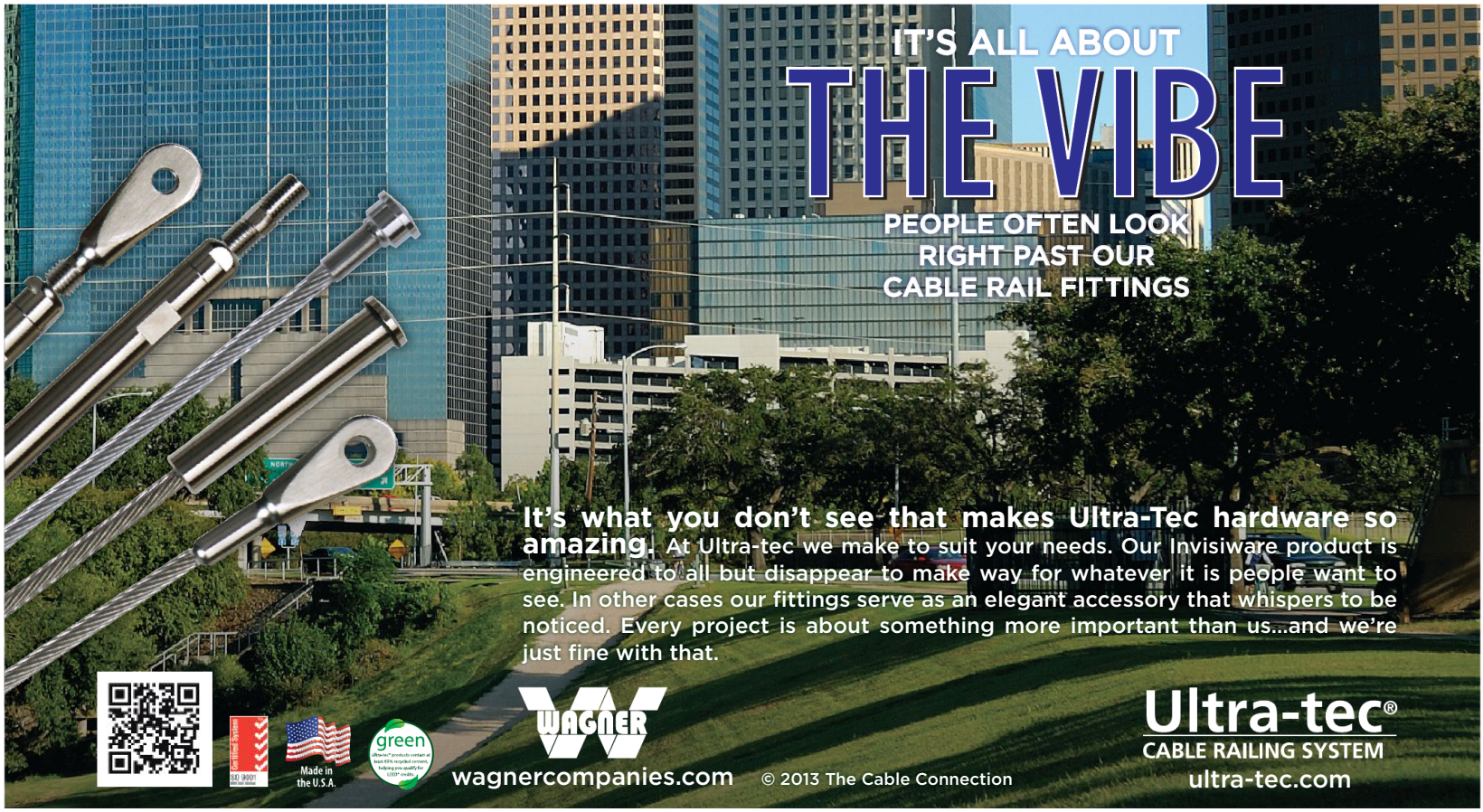
Meyers resides in Northern Virginia, where she brews homemade beer with her boyfriend and her cat, Cat Stevens.

JESSICA RUBENSTEIN

JESSICA RUBENSTEIN is a graphic designer at ARCHITECT. A native Pennsylvanian, she earned a bachelor's in graphic design from Susquehanna University in 2011.

Realizing she needed to find a location where graphic design jobs outnumbered cows, Rubenstein set her sights on the Washington, D.C., metro area. As a designer, she supports articles with thought-provoking illustration and photography.

Graphic design is her first love, but Rubenstein also spent several years programming toolpaths for CNC machines, creating spare parts for combat robots, and participating in seven Red Bull engineering competitions along the East Coast.



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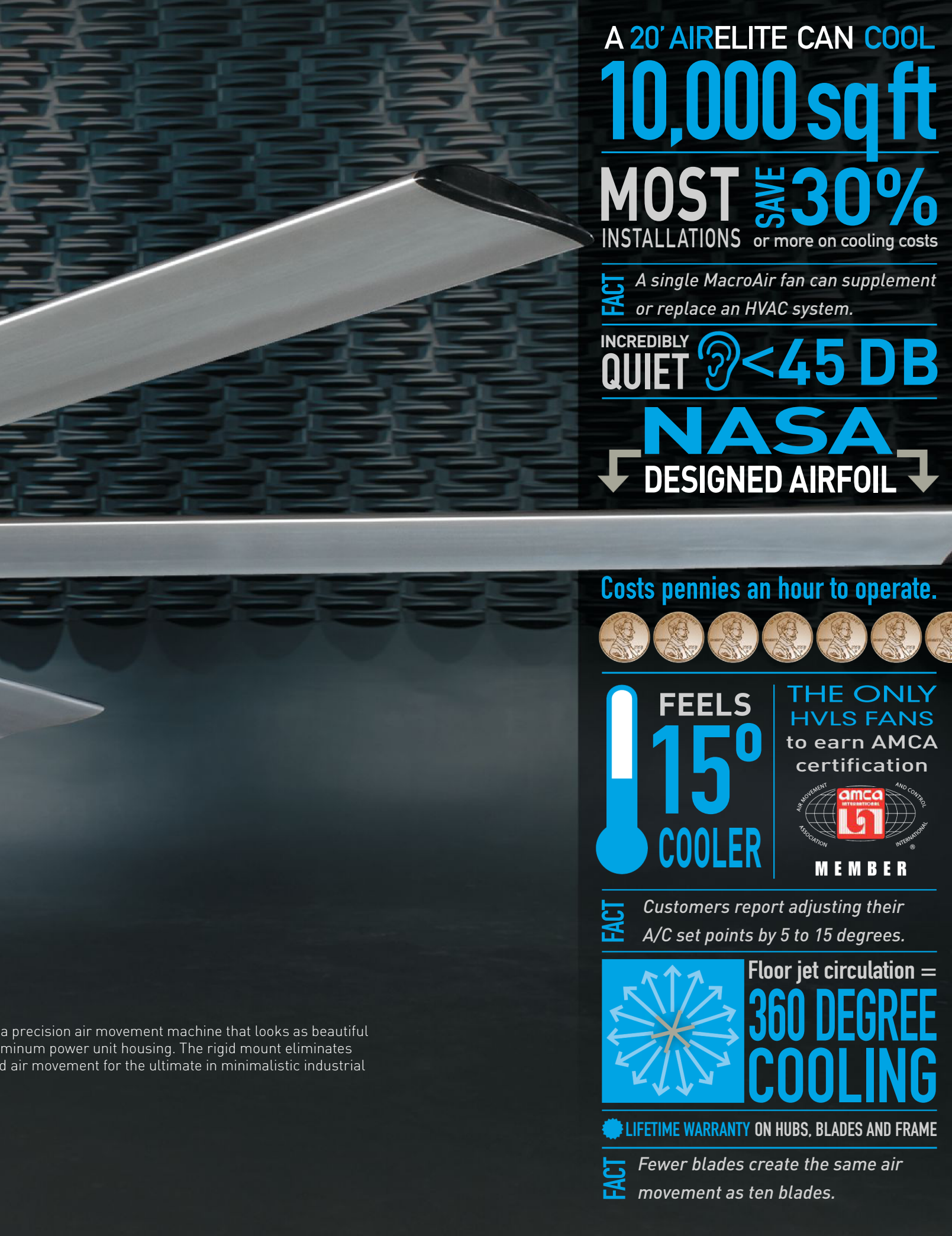
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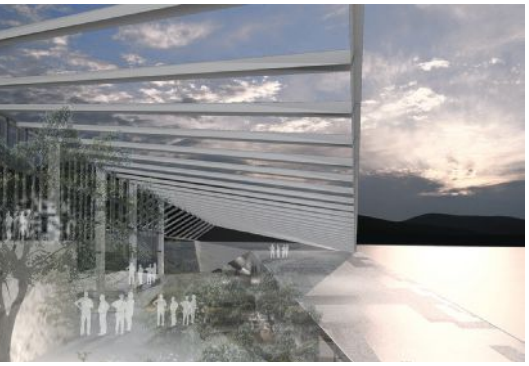

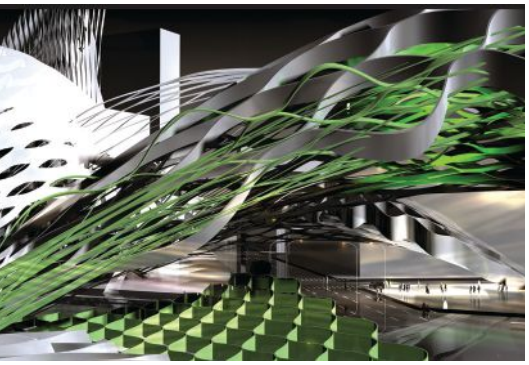

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FRONT

EXHIBITING UNCERTAINTY

'A NEW SCULPTURALISM' WILL OPEN AT MOCA AFTER ALL, THOUGH NOT NECESSARILY AS PLANNED.

Early in May, when the *Los Angeles Times* reported that the Museum of Contemporary Art (MOCA) in Los Angeles might be canceling a sprawling exhibition devoted to Southern California architecture, it caught many of the participating architects by surprise. Organized by guest curator Christopher Mount, "A New Sculpturalism: Contemporary Architecture from Southern California" was intended to shine a light on the last quarter-century of avant-garde design in Los Angeles, the city that produced Thom Mayne, FAIA, and Frank Gehry, FAIA.

For months, some three dozen architects had been laboring on the exhibition. Elena Manferdini, of Atelier Manferdini, had spent the better part of a year working on her firm's Tempera Pavilion (pictured), a structure made out of powdercoated folded aluminum. But with the show's catalog already in print, and four weeks left until the June 2 opening, the *L.A. Times* was reporting that Gehry was out. ("It didn't seem to be a scholarly, well-organized show," he told the paper.) This left a gaping hole in the programming and a giant question mark hanging over one of the biggest exhibits of the "Pacific Standard Time Presents" series.

Mount told the press that the show was in danger of being canceled. Participating architects were left in the lurch. "We are in the middle of construction," Manferdini said. "I can't think this won't happen." Greg Lynn, of Greg Lynn Form, also learned about the possible cancellation

through the media reports. "It's not been an entirely clear process from the start," he said.

For more than two weeks after the story broke, MOCA remained silent on the question of "A New Sculpturalism,"leading Arshia Mahmoodi, a principal at Void and an architect who was building a model at his own expense for the show, to launch an online petition. "We respectfully urge you to champion this mission to its resolution," he wrote in an open letter to MOCA director Jeffrey Deitch. It was signed by more than 100 people (though not by any of the exhibition's stars, such as Mayne, Eric Owen Moss, FAIA, Neil Denari, AIA, and Lynn).

Sixteen days after the story first broke, MOCA issued a two-sentence statement announcing that the exhibition would indeed open—albeit two weeks late, on June 16. "The museum is excited to bring the architecture community in Los Angeles together in recognition of the world-class architecture that has been and continues to be conceived in the city," the statement read.

But many questions still linger, such as whether Gehry is still out, Mount is still curator, or whether the exhibition will be edited or reorganized in some way. (Gehry, Mount, and the museum did not respond to requests for comment.)

Despite the uncertainty, Mahmoodi, for one, is relieved the show will go on. "This exhibition is the rare opportunity for the general public to come and see what's possible," he says. "Architects often have exhibits at places like SCI-Arc and UCLA, but a lot of people don't really see those." CAROLINA A. MIRANDA

'ARCHITECT LIVE' CO-HOSTS NAMED

AMANDA GANN AND KAREN TANG WILL JOIN STEPHEN CHUNG AS CO-HOSTS AT THE 2013 AIA NATIONAL CONVENTION.

Karen Tang

Amanda Gann

Two co-hosts will join Stephen Chung, AIA, onstage for ARCHITECT Live at the 2013 AIA National Convention: Amanda Gann and Karen Tang.

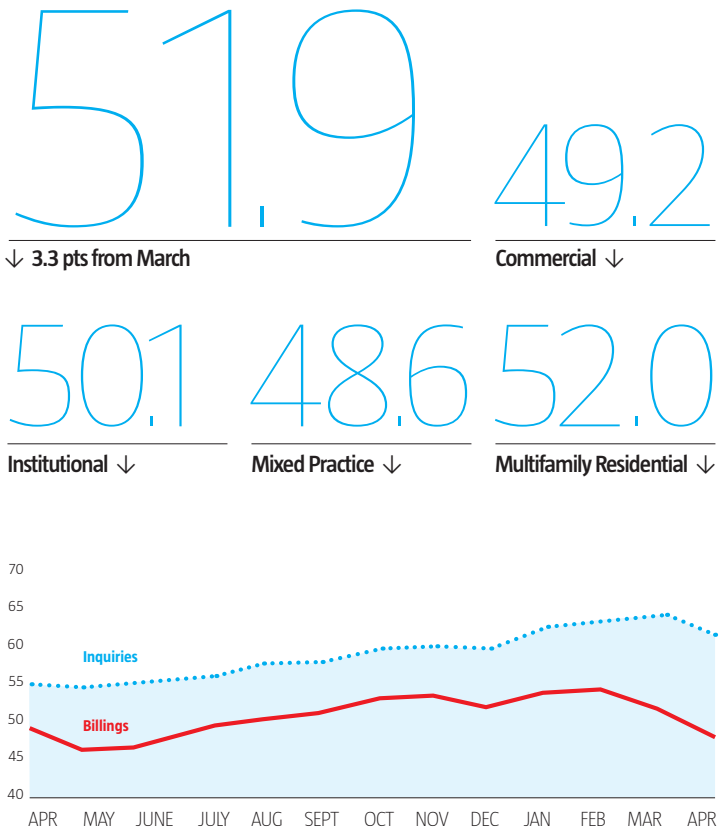
After counting some 6,000 votes, the AIA announced the winners of the contest today. Voters selected Gann and Tang from nine finalist videos.

Gann works at Red Chair Architects in Knoxville, Tenn. She received her bachelor's degree in architecture from the University of Tennessee in 2012, where she is working as a researcher for Ted Shelton, FAIA, and pursuing her master's degree in architecture.

Tang is an undergraduate at the California Polytechnic University, Pomona, where she is an active member of the American Institute of Architecture Students. She has interned at Jingsen Architecture Design Firm in Guangzhou, China, and she will pursue a research project this summer at the Getty Center for Earthen Architecture Initiative. KRISTON CAPPS

April 2013

Architecture Billings Index



ABI Shrinks in April

THE EIGHT-MONTH POSITIVE STREAK IS OVER.

In April, the American Institute of Architects' Architecture Billings Index marked the first negative month of growth in the demand for architectural design services in nine months. With a national score of 48.6, down more than three full points from March's score of 51.9, the architecture industry is seeing the first significant soft patch, across all regions and industry sectors, in nearly a year.

The score for project inquiries came in at 59.5, down from 60.1 in March. This means that inquiries are still growing, but it did break a streak of three straight months where the index for project inquiries not only continued to grow, but stayed above 60.

For April, the ABI's data departs a little from the trends seen from the U.S. Department of Labor's Bureau of Labor Statistics' employment reports. The BLS reported a slightly better than expected 165,000 jobs added to the economy in April, with architectural and engineering services adding 2,700 jobs in April. This bested the 2,100 architectural and engineering services jobs added in March.

Half of each of the nation's four regions and the industry's four sectors showed growth, while the other half slipped below 50. All except the South region, however, came in with a weaker score than it had in March. Those regions and sectors that are still in growth territory are closer to contraction in April than they were in March. GREIG O'BRIEN

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METRO DELENDA EST

HARRY WEESE'S VISIONARY DESIGN FOR D.C.'S METRORAIL STATIONS ISN'T BROKEN—SO METRO AUTHORITIES ARE TRYING TO FIX IT.

At press time, there were at least 97 escalators out of service in the Washington, D.C., Metrorail system. It's much easier to keep tabs on Metro's moving staircases than to use them: There's a Twitter feed (@metroescalators) devoted to reporting escalator outages as they happen (based on API data), plus a supplemental Tumblr featuring analysis of these data.

But despite the fact that one escalator at the McPherson Square Metro station has been out of service for four months—to name 1 of 97 examples—authorities at Metro are turning their attention instead to Metro's look and feel. This spring, Metro announced a plan to modernize one Metro station by changing elements of the historic Metro design by architect Harry Weese.

The plan is the brainchild of Ivailo Karadimov, AIA, a Bulgarian architect who is the manager of architecture for Metro. Karadimov's plan for the Bethesda Metro station—which will serve as a $10 million prototype for the new station design—would introduce stainless steel and clear glass to Weese's restrained palette of granite, concrete, and bronze. A Gensler veteran who joined Metro in 2009, Karadimov has proposed replacing bronze features with stainless steel and increasing light levels throughout the system. Metro's brown and orange tones are out; Karadimov has suggested touching up the distinctive Weese-designed pylons with silver or gray.

The U.S. Commission on Fine Arts, which will have a say in any final plans for Metro, has already rejected one aspect of the prototype design: Karadimov has agreed not to try to replace the distinctive concrete parapets located at the top of platform stairwells with glass. Fans of Weese's design have even criticized elements of the renovation that are popular with riders, such as installing more and brighter lights in some of the darker stations. "Every generation has the impulse to make it brighter, but that's like taking a Victorian storefront and slapping aluminum siding on it," Robert Bruegmann, the author of a biography on Weese, told *The Washington Post*.

At $10 million per station, the renovation scheme is not feasible for all 86 stations. (In 2011, for example, Metro authorities projected spending just $150 million on its escalators over the course of 5 years.) Metro is bound to face scrutiny for giving one station a total makeover when many more face urgent problems, including leaks. One thing the renovation will fix: three escalators. Metro picked Bethesda as its guinea pig because its escalators are scheduled to be replaced in 2014. K.C.

STEP UP, STEP DOWN

BIG MOVES ON THE CAREER LADDER

Michael Sorkin
Architecture columnist, *The Nation*

Michael N. Kaiser
Director, Lehigh Valley Planning Commission, Penn.

Jonathan King
Vice president, Cannon Design

Lindsay Rowinski
Hugger-in-chief, National Trust for Historic Preservation

Rowinski may not draw a salary as hugger-in-chief, but the gig comes with benefits. She travels to interesting places, visits historic buildings, and hugs them.

Rowinski is in fact a performance artist. For one piece, she hugs buildings using two extended Muppet arms (which she operates with the help of volunteers acting as puppeteers).

In May, the National Trust for Historic Preservation embraced Rowinski, documenting her as she works—or hugs—under the hashtag #buildinghugger.

Asher Hartel
Planning director, City of San Jacinto, Calif.

Norbert W. Young, FAIA
Executive vice president, Lehrer

Peter Mulvaney
Water specialist, SOM

As a former sustainable infrastructure director for the city of Chicago and a consultant for Greenleaf Advisors, Mulvaney has worked in both the public and private realm. Both will factor into his work at Skidmore, Owings & Merrill.

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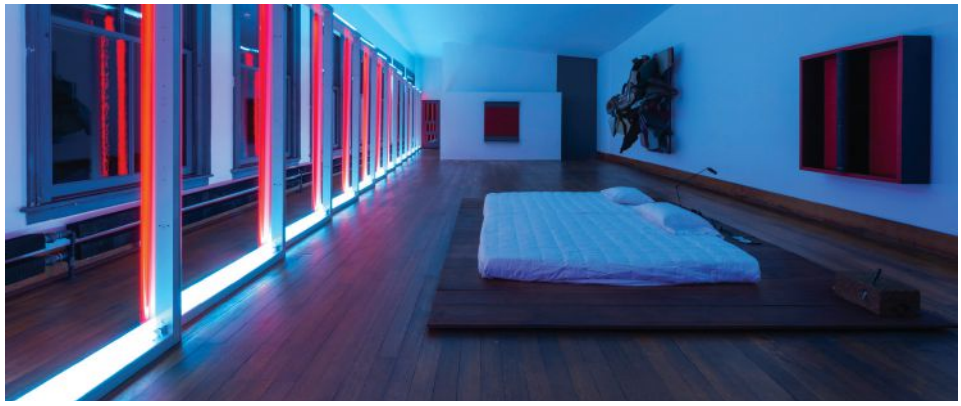

101 SPRING STREET BY DONALD JUDD (AND ARO)

RESTORING DONALD JUDD'S CAST-IRON HOME AND STUDIO BUILDING MEANT CHANGING NOTHING, AND EVERYTHING.

The Judd Foundation is finishing preparations to open 101 Spring Street to the public, an 11-year effort that culminated in a remarkable restoration by New York–based Architecture Research Office (ARO). This outcome was not at all certain—or even likely—when the artist Donald Judd passed away unexpectedly in 1994.

Judd first developed his concept of space at 101 Spring Street, his home and studio in lower Manhattan. Judd purchased the five-story corner loft building in 1968 to make his art, raise his young family, and house his cactus collection. In 2010, ARO began the process of "essentially putting an entirely new building inside the old building," says project architect Adam Yarinsky, FAIA.

Construction management firm Sciame encased the building in climate-controlled scaffolding for more than two years. Walter B. Melvin Architects removed the 1,300 pieces of the cast-iron façade for stripping and zinc priming; around 400 pieces were recast. The roof was removed, reinforced, and rebuilt. All 60 casement windows were dismantled and reglazed with restoration glass.

Judd's worn battleship gray paint on the casements was preserved as-is, Yarinsky says. "I think a lot of the crudeness of the building, and a lot of the economy and straightforwardness of how he worked, is what makes the space feel special." GREG ALLEN

FULL ARTICLE ONLINE AT ARCHITECTMAGAZINE.COM

Preserving Cunningham's Legacy

THE ARCHITECT CONTRIBUTED TO THE DESIGN OF THE POLICE ADMINISTRATION BUILDING IN PHILADELPHIA, FOR WHICH A GRASSROOTS PRESERVATION EFFORT IS NOW UNDER WAY.

Warren "Barney" Cunningham

In Philadelphia, many architects and engineers found a mentor and friend in Warren "Barney" Cunningham, FAIA. Cunningham passed away on Jan. 24 at the age of 90. A soft-spoken man who excelled in the technical aspects of buildings, he made his mark as a named partner in the Philadelphia firm Geddes Brecher Qualls Cunningham Architects (GBQC).

The firm's projects include the Police Administration Building—also known as the Roundhouse—in Philadelphia. The building won the American Institute of Architects' Gold Medal Award for Best Philadelphia Architecture in 1963. But this spring, the city announced plans to sell the Roundhouse in a multiparcel bid to build a new police station.

Two graduate students at the University of Pennsylvania—where Cunningham earned his bachelor's degree in architecture on the GI Bill—have launched a "Save the Roundhouse" campaign on Facebook. The students, Kimber VanSant and Allee Berger, are also pursuing historic landmark status for the building.

Whatever becomes of the Roundhouse, students at Penn are bound to become more familiar with Cunningham and his work. PennDesign, the University of Pennsylvania's School of Design is organizing a lecture series in Cunningham's honor. WANDA LAU

TOP LEFT: JUDD FOUNDATION; JOSH WHITE
BOTTOM: COURTESY CUNNINGHAM LECTURE FUND, PENNDESIGN

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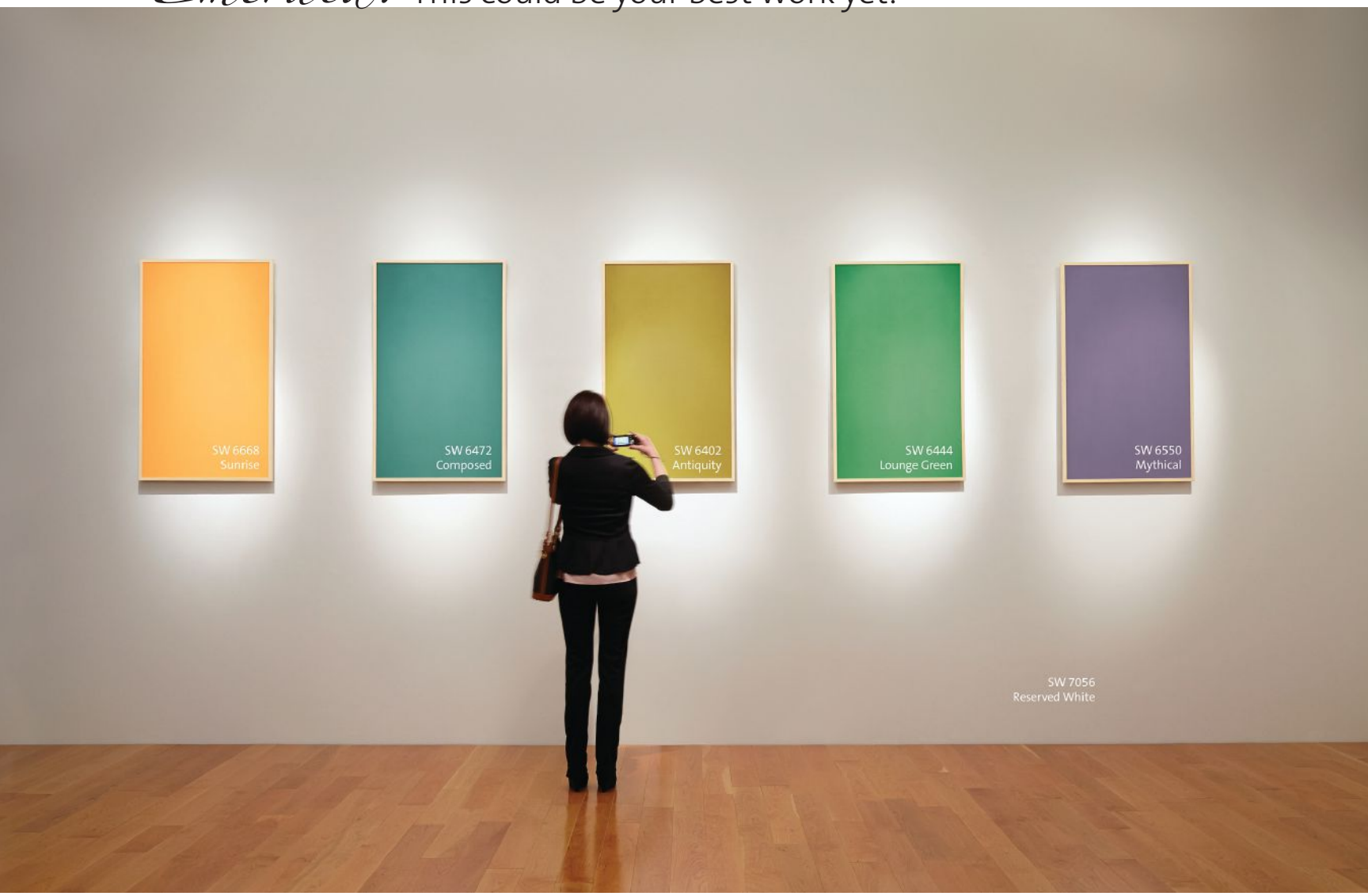

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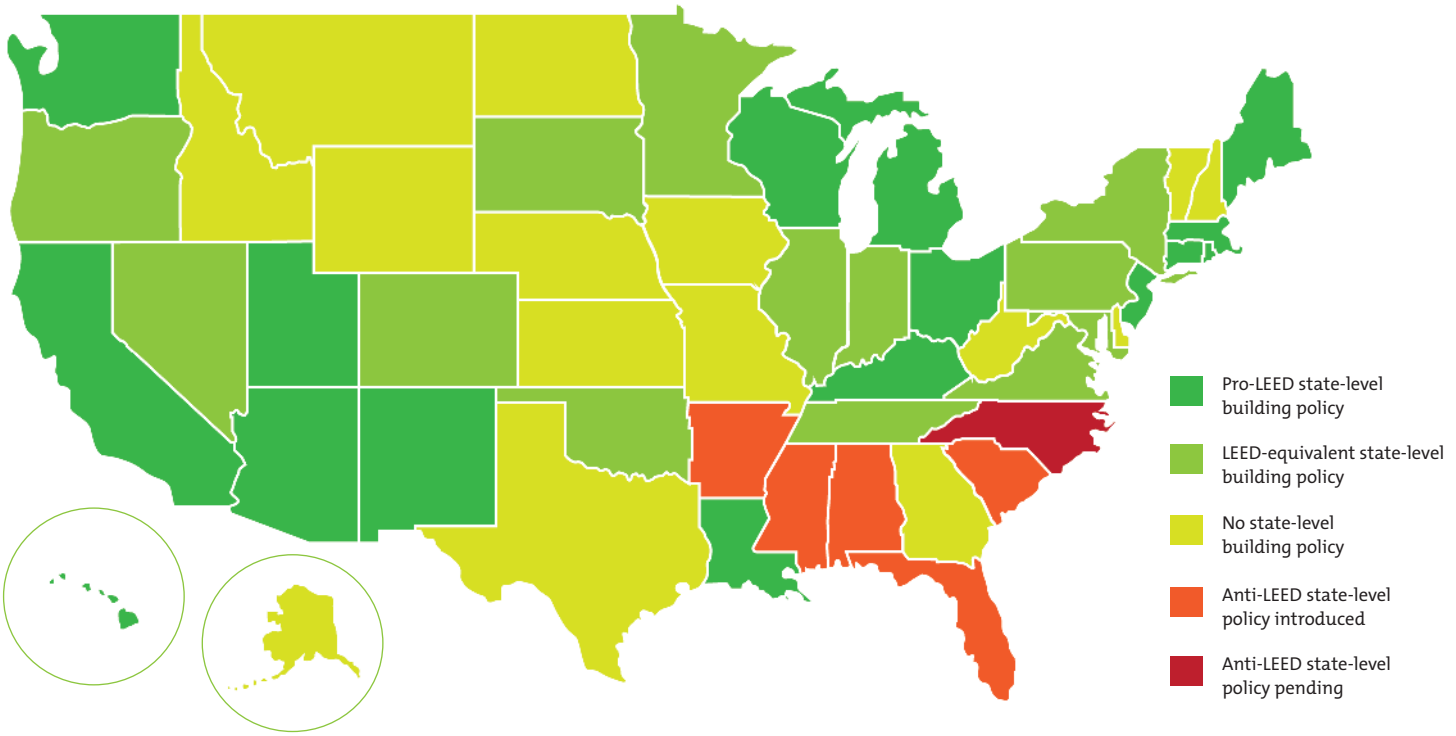


ONE NATION UNDER LEED

The Tar Heel State took one step closer to becoming the first state to buck the nation's most visible building performance ratings system.

By a broad margin, the North Carolina House of Representatives passed a bill in May that will bar the use of LEED for rating public projects. The Protect/Promote N.C. Lumber bill will do exactly that, if passed by North Carolina's republican-controlled Senate and signed by the state's republican governor. The timber industry has argued—successfully, so far—that the U.S. Green Building Council's ubiquitous green rating system disadvantages locally sourced wood.

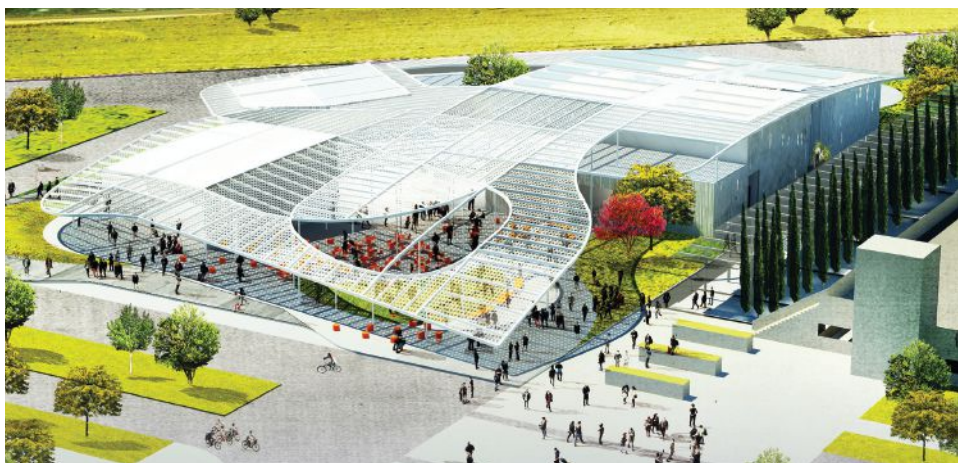
The LEED system has its own allies in this fight. The Charlotte-based steel company Nucor Corp., for example, benefits from the state's current policy, which permits cities and counties to offer reduced fees and rebates for LEED-certified construction projects. Nucor—a member of the so-called "toxics lobby" that pushed in 2012 for weaker state-level air standards—continues to lobby state legislators on LEED's behalf.

The debate is spreading. The state of Florida, for example, requires that all new state office buildings adhere to a national green building code, without mentioning LEED specifically—much as in Pennsylvania, Nevada, and other states. But a proposed Florida bill would circumvent LEED. It has the backing of the state's timber industry, which has argued that just 200 of Florida's 16 million acres of forest are LEED certified.

Were Texas to adopt a state-level anti-LEED policy, it would trump local pro–green building policies set by eight cities and one county. Arguably, city and county policies can do as much to promote sustainability as state-level policies. As sustainability advocates may discover, the best green legislation may be no state legislation at all. K.C.

SO VERY ILL

The University of California, Davis, named SO-IL as the firm that will design its new Jan Shrem and Maria Manetti Shrem Museum of Art. The centerpiece of the design by SO-IL—an emerging firm profiled in ARCHITECT's March issue—is a 50,000-square-foot steel canopy that covers both interior and exterior spaces. SO-IL has partnered with Bohlin Cywinski Jackson on the $30 million museum. Groundbreaking is planned for 2014. K.C.



KARIN HIGGINS/UC DAVIS

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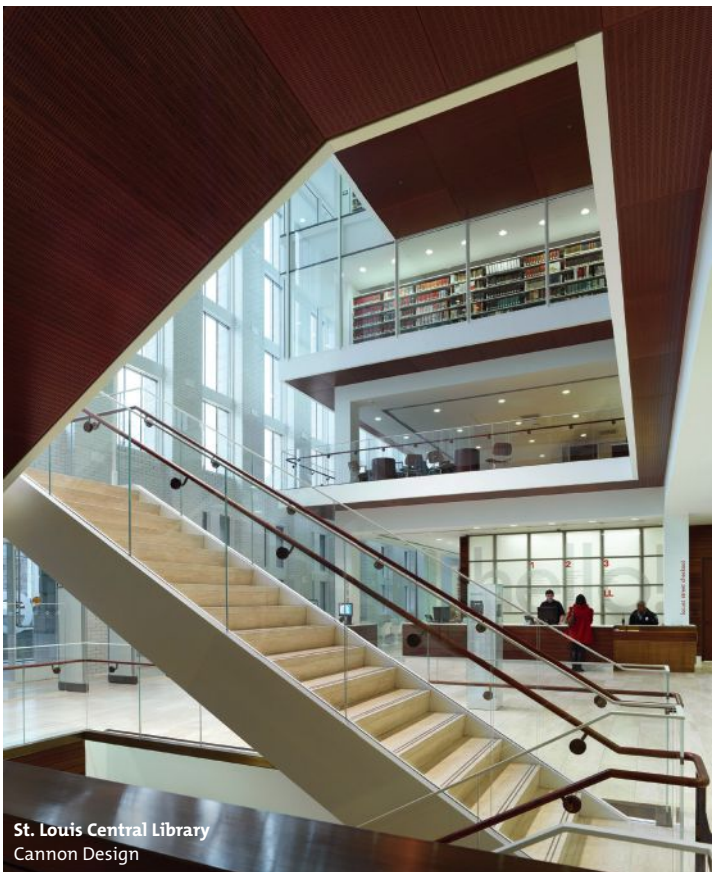


St. Louis Central Library
Cannon Design

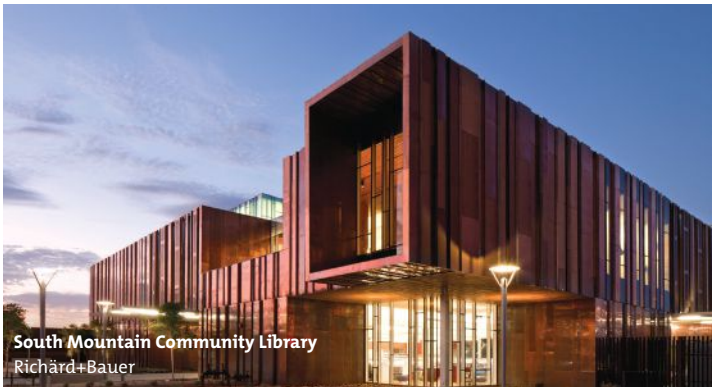
2013 AIA/ALA Library Building Awards

SIX PROJECTS RECEIVED THE BIENNIAL AWARDS.

Presented jointly by the AIA and the American Library Association, the biennial AIA/ALA Library Building Awards honor the best new U.S. library projects. The six recipients of the 2013 awards range from a satellite branch in an underserved Washington, D.C., neighborhood to a restoration of one of the nation's finest Beaux-Arts buildings.

The South Mountain Community Library, designed by Richärd+Bauer for Phoenix, offers shade and views of the surrounding mountains. Another small library—the Anacostia Neighborhood Library, designed by the Freelon Group for Washington, D.C.—serves as a hub of community and stimulus for a low-income neighborhood.

Two renovations received awards: The Oak Forest Neighborhood Library and the Cass Gilbert–designed St. Louis Central Library. One award was given for innovation: Snøhetta trimmed the total area of the James B. Hunt Jr. Library by introducing an unprecedented automated book delivery system (for more, see page 294 in this issue). And Rice+Lipka Architects won an award despite breaking the rules: The Hamilton Grange Teen Center features a niche for snacking and talking. K.C.

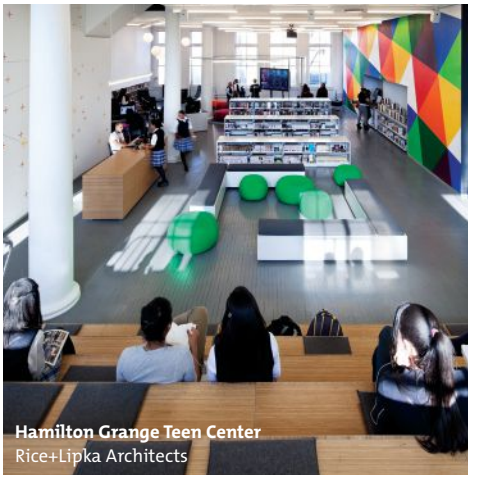


South Mountain Community Library
Richärd+Bauer

Oak Forest Neighborhood Library
NAAA + AWI + JRA

James B. Hunt Jr. Library
Snøhetta and Pearce Brinkley Cease + Lee

Anacostia Neighborhood Library
The Freelon Group



Hamilton Grange Teen Center
Rice+Lipka Architects

TOP: TIMOTHY HURSLEY. MIDDLE: BILL TIMMERMAN, LUIS AYALA. BOTTOM: MARK HERBOTH, MICHAEL MORAN

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BIG MIAMI VS MIAMI OMA

A COMPETITION TO DESIGN THE MIAMI BEACH CONVENTION CENTER MASTER PLAN IS BRINGING THE HEAT TO MIAMI.

Every December, the world's 1 percent flocks to South Beach for the Art Basel Miami Beach art fair and its attendant satellite fairs, runway shows, galas, and feasts. It is possibly the only event on the calendar that draws both Davos Man and Kanye West, and it certainly registers as one of the fanciest events that either could attend anywhere.

An effort is under way to make South Beach that much hipper by redeveloping the Miami Beach Convention Center—a relative blight compared to Herzog & de Meuron's 1111 Lincoln Road or any of the strip's famous Art Deco hotels. Now OMA and Bjarke Ingels Group (BIG), two of the world's flashiest firms, are competing to rethink the 52-acre site.

Miami Beach Square—a proposal from BIG with West 8, Fentress Architects, JPA, and Portman CMC—includes a low-slung convention center with a green roof (covered in a dot art installation in BIG's mischevious rendering). A central square connects public and private uses across the 52-acre plot. The development restores the adjacent historic Jackie Gleason Theater and opens its programming to the square.

The alternative proposal—from OMA with Raymond Jungles, tvsdesign, Michael Van Valkenburgh Associates, UIA, and Tishman—emphasizes the theater restoration project and promises to promote circulation, too. OMA's plan, however, includes a 54-foot-high artificial hill, which would be the area's highest elevation.

Both master plans include residential and commercial space and public amenities. Whichever scheme Miami approves, it will be a plan fit for a king—whether that's Yeezy or LeBron James. K.C.

Miami Beach Square
Bjarke Ingels Group

Miami Beach Convention Center
OMA

ESTO TIMELAPSE
With the installation of the last piece of its 408-foot-tall communications spire, One World Trade Center has topped out at its iconic height of 1,776 feet. The inclusion of the spire makes 1 WTC—captured by Esto photographer David Sundberg—the tallest building in the western hemisphere. KATIE GERFEN

BOTTOM: DAVID SUNDBERG/ESTO

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ZUMTHOR AND LACMA, BY THE NUMBERS

PETER ZUMTHOR'S PLAN FOR THE LOS ANGELES COUNTY MUSEUM OF ART COMES AT A COST.

On June 9, the Los Angeles County Museum of Art opens a bold new exhibit on the Los Angeles County Museum of Art. "The Presence of the Past: Peter Zumthor Reconsiders LACMA" will introduce the Swiss architect's proposal to build a $450 million building where the core LACMA campus stands today.

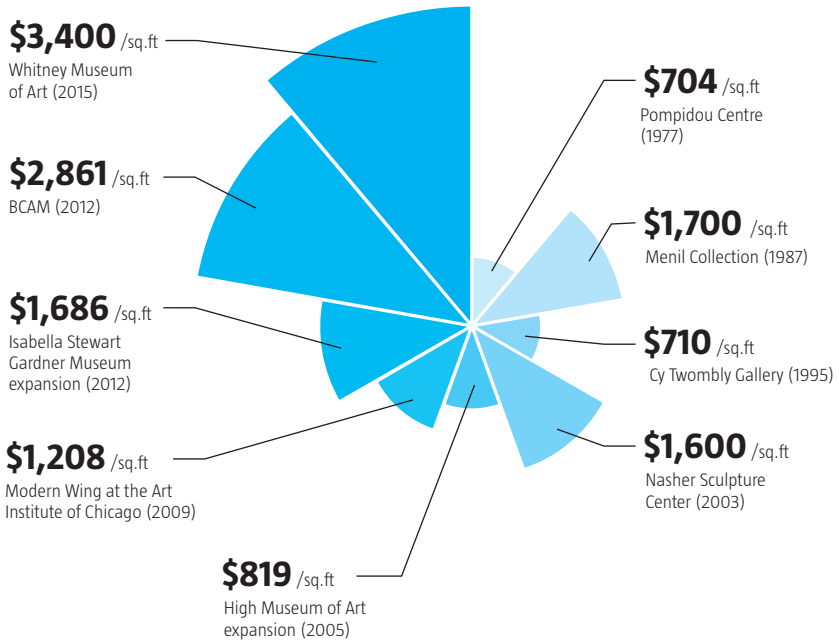
The Zumthor building would replace three buildings by William L. Pereira—the Bing Center, Hammer Building, and Ahmanson Building—all built in 1965 (and pictured in the graph below). It would also do away with the 1986 Art of the Americas addition (not pictured).

This is hardly the first grand vision floated for LACMA, which failed to realize a scheme proposed by Rem Koolhaas, Hon. FAIA, in 2001. And as L.A. history buffs will tell you, the museum's founding director and donor only settled on Pereira after failing to find a consensus pick between Ludwig Mies van der Rohe and Edward Durell Stone.

Zumthor's LACMA is unlikely to be the museum's most expensive addition; that honor belongs to the Broad Contemporary Art Museum (BCAM) by Renzo Piano, Hon. FAIA. Which perhaps explains why Piano was never tapped to redesign the core campus. K.C.

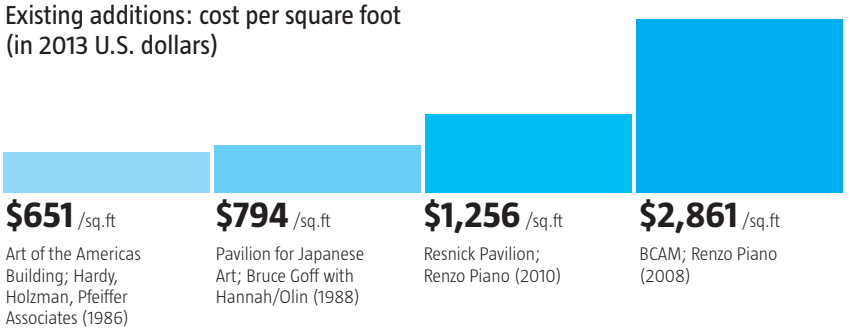
Why not just have Renzo build it?

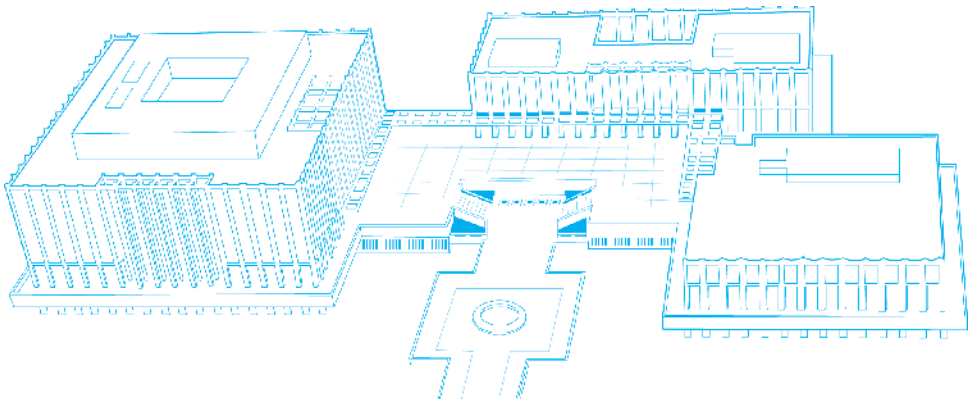
Select Renzo Piano Building Workshop cultural projects: cost per square foot (in 2013 U.S. dollars)



LACMA through the years:

Existing additions: cost per square foot (in 2013 U.S. dollars)





LACMA 1965: (from left) the Ahmanson, Hammer, and Bing Center buildings

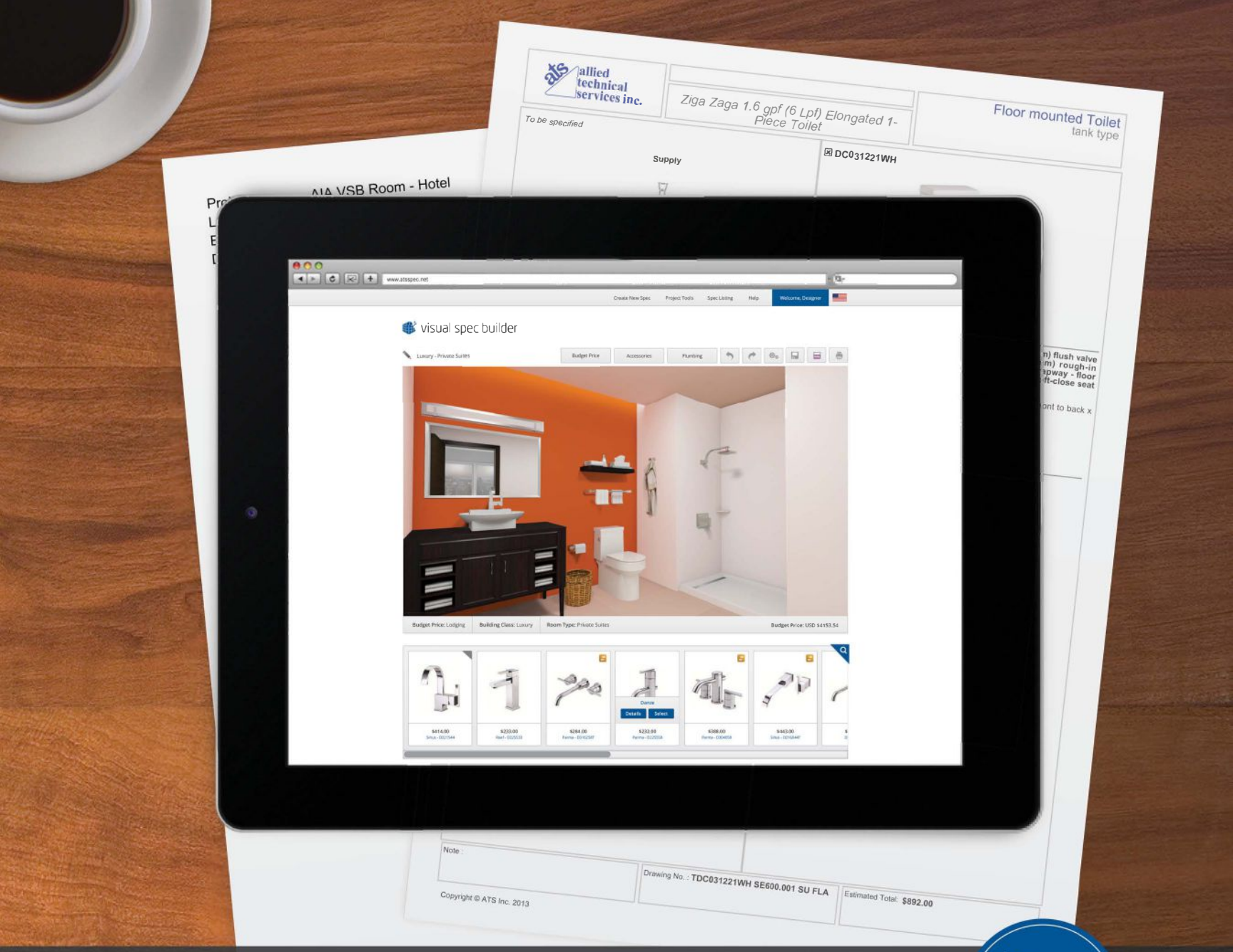
The heart of LACMA:

Designing the core (in 2013 U.S. dollars)

$450 million ($1,229/sq. ft.)
Peter Zumthor proposal (2013)

$328 million ($1,002/sq. ft.)
OMA proposal (2001)

$85 million ($435/sq. ft.)
William Pereira's core LACMA campus (1965)



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Founded in 2006 by Adrian Smith, FAIA, Gordon Gill, FAIA, and Robert Forest, AIA, AS+GG Architecture boasts a trio of principals whose portfolios include several of the tallest buildings in the world, including the Burj Khalifa (Dubai) and the Kingdom Tower (Jeddah, Saudi Arabia). Not content just to reach new heights, the firm has consistently pushed for high-performance, energy-efficient structures such as the Wuhan Greenland Center in China, which uses aerodynamic design to reduce the amount of embodied carbon in its supporting steel. AS+GG has also master-planned Tianfu Ecological City, which aims to be a self-sustaining satellite of Chengdu, China. DEANE MADSEN

Tianfu Ecological City
Chengdu, China

Beijing Waldorf-Astoria
Beijing

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American Folk Art Museum Building Gets a Life Raft from Diller Scofidio + Renfro

Slated for demolition by the end of this year to make way for a planned expansion of the Museum of Modern Art, the former home of the American Folk Art Museum may have received a stay of execution.

Officials at MoMA are reconsidering the decision to raze the Folk Art Museum after selecting Diller Scofidio + Renfro to develop the MoMA West End expansion. The firm has asked MoMA for flexibility with regard to the Tod Williams Billie Tsien Architects–designed building, whose fate was sealed by MoMA officials last month.

"They thought it would be *fait accompli*, no big deal," Tsien told ARCHITECT, speculating about what MoMA officials could have been thinking when they announced their intention to demolish the museum (see Karrie Jacobs's story on page 180). "I think MoMA has been totally shocked by the fact that there's opposition."

MoMA's decision to raze the museum—which was the first purpose-built museum building to open in New York in more than three decades when it was completed in 2001—sparked an immediate outcry across the design community. More than 30 of New York's most prestigious architects joined critics of the decision when the Architectural League of New York called on MoMA to stay its hand.

Nothing is final, but it would appear that leaders at MoMA are listening. K.C.

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A TALK WITH ...

IÑAKI ÁBALOS, THE NEW CHAIR OF THE DEPARTMENT OF ARCHITECTURE AT THE HARVARD UNIVERSITY GRADUATE SCHOOL OF DESIGN.

Your portfolio differs from many of your predecessors. What do you make of this?
I am a European architect, so the types of projects I have done are probably different from the typical career of an American architect. In Spain, we deal mainly with competitions, which allows you to choose which kind of identity you wish to develop.

The GSD has been in the news recently, since two of its students initiated a petition to honor Denise Scott Brown with a Pritzker inclusion ceremony. What do you think of their position? Is this type of engagement something you hope to harness?
I am completely in favor of this. My partner [Renata Sentkiewicz] is a woman, and I cannot understand why this thing has not been called into question even earlier.

I recognize it's entirely too early to ask this, but I'll ask anyway: What are your aspirations for the department?
The department has always embraced history, technology, and design, and I think this is so valuable, so I want to reinforce these conversations. I might bring a more scientific approach in the techniques of the architect.

Sounds like yours will be a scientific era?
If I am interested in one single thing, it would be beauty. This should always be the outcome of sustainability and thermodynamics. All of this—beauty, thermodynamics, the high-rise—pivots around how we understand the human body. JOHN GENDALL

FULL INTERVIEW AT ARCHITECTMAGAZINE.COM

MICHIGAN MODERN

Minoru Yamasaki is enjoying something of a revival in Detroit. In December, Rock Ventures purchased One Woodward Avenue, Yamasaki's greatest Detroit building. And in May, Wayne State University reopened its Yamasaki–designed McGregor Memorial Conference Center Reflecting Pools, a campus landmark (pictured) that has lain dormant since the late 1990s. Yamasaki is certain to be the subject of continued discussion this month at a symposium on Michigan Modernism taking place on June 13–16 at Cranbrook. K.C.

2013 AIA/HUD AWARDS

The AIA and the Office of the Secretary of the U.S. Department of Housing & Urban Development recognize excellence in several categories. Three projects merited distinction: a public housing project by Dattner Architects and Grimshaw Architects for the Bronx, N.Y. (Excellence in Affordable Housing Design Award); a community learning center by Abacus Architects + Planners for Leominster, Mass. (Community-Informed Design Award); and a passive solar housing scheme by Abacus Architects + Planners for Stoneham, Mass. (Housing Accessibility/Alan J. Rothman Award). K.C.

Community Learning Center
Abacus Architects + Planners

New Accessible Passive Solar Housing
Abacus Architects + Planners

Via Verde
Dattner Architects and Grimshaw Architects

BOTTOM: WALTER P. REUTHER LIBRARY, WAYNE STATE UNIVERSITY

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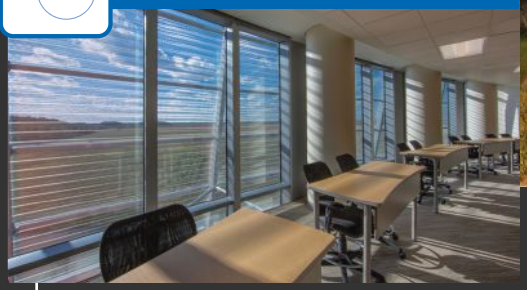

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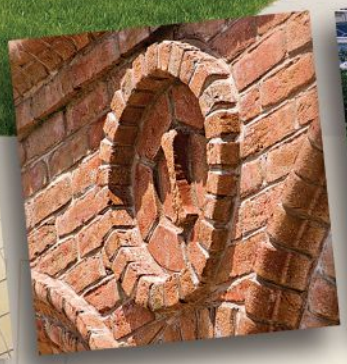

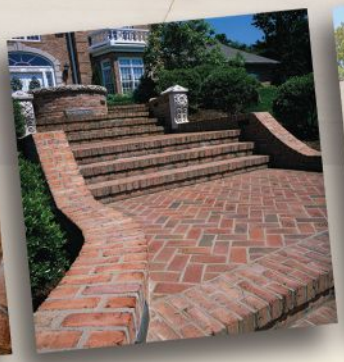

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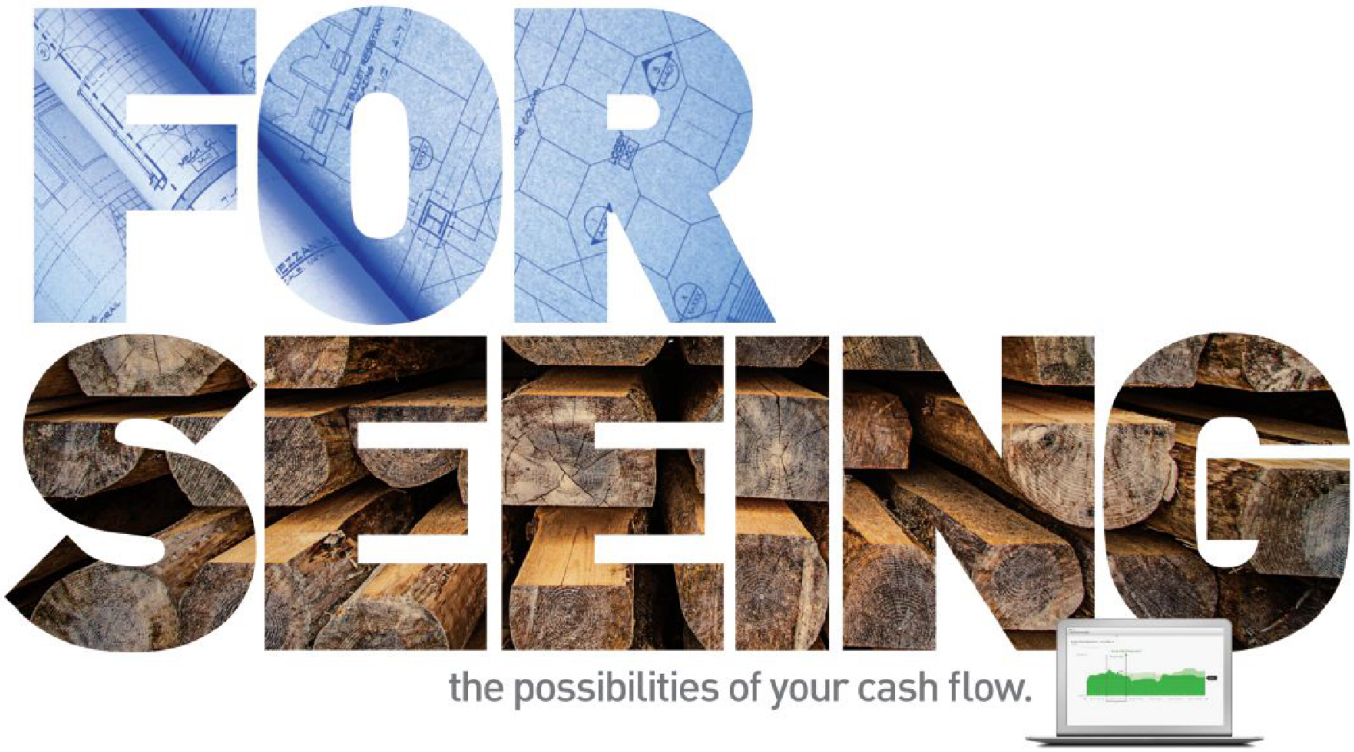

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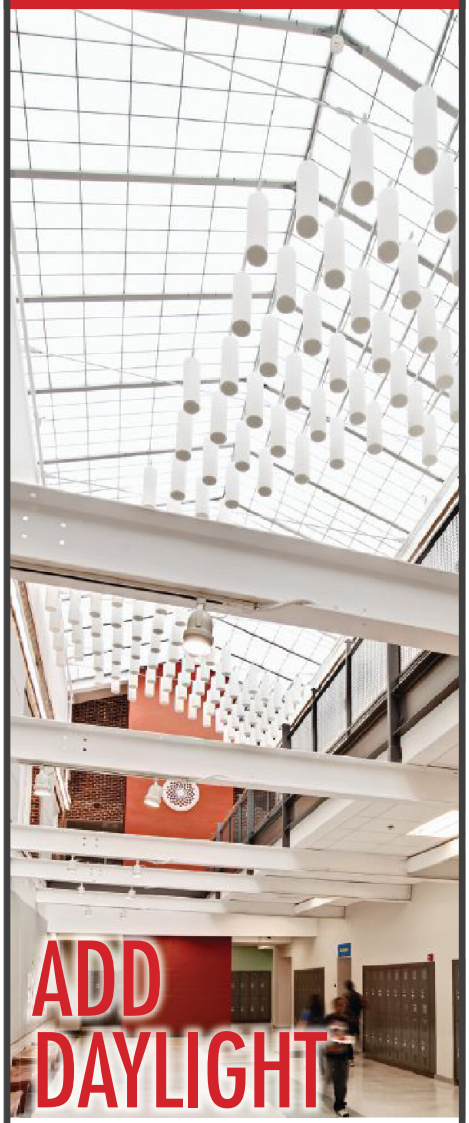

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» NOW 77 KNOWLEDGE 79 FEATURE 82 PERSPECTIVE 84

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AIAVOICES

DENVER'S DEAN | A NEW CHAPTER FOR EDUCATION

Mark Gelernter, Ph.D., Assoc. AIA, is dean of the College of Architecture and Planning at the University of Colorado at Denver. He is the author of numerous books and articles on architectural history and theory and, for the past decade, he and the rest of the faculty have evolved the college's programs to be more community-focused and practice-oriented. "We're going through a generational shift in design education, which is exciting," he says. "Students have more freedom than ever before to define the values of their field, and it's our job to help them."

ONE OF THE STRENGTHS OF OUR SCHOOL IS THAT WE ARE IN downtown Denver, one of the country's regional design centers, with a high number of architects per capita. We have a very close relationship to the professional community—and both sides see this as a mutual partnership. They benefit when we attract top-notch students, and we benefit when our graduates get hired.

Several years ago, we hired Chris Nimms, FAIA, as our first director of mentoring and internship programs. He came from Gensler's Denver office, he's very well-connected to the Denver design community, and he's the perfect matchmaker between our students and employers.

Recently, we've focused on three signature areas that cut across architecture, planning, and landscape architecture. The first is "emerging practices," which recasts the college as a think tank to reimagine professional practice in the 21st century. The hang-out-your-shingle model doesn't seem to be viable in the way that it once was, so we want to help students help themselves to define practice going forward. Most prominent here is our award-winning design/build program.

The second area of focus is "engaged communities," which has our students working with communities in Denver and throughout the state to help them with real planning and design projects.

The third area, which I'm really excited about, is "enduring places." It's the logical extension of sustainability, in encouraging the adaptive reuse of existing buildings. This brings together our historic preservation programs with our sustainability initiatives, and it encourages a renewed look at traditional languages of design. We now partner with the Institute of Classical Architecture and Art to provide a certificate in classical architecture.

What is the role of a school of architecture? We serve a number of interests. We have a responsibility for educating the next generation of architects, landscape architects, and planners—and we've always held the view that we want our students to get not just that entry-level job, but to demonstrate leadership within the field.

—As told to William Richards AIA

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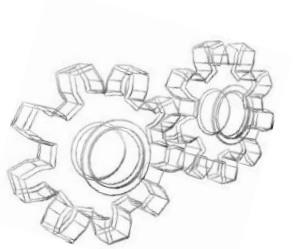
1 London Calling
Festival
June 1–30

3 Bare Bones
Houston
June 13–July 19

2 Happy Campers
AIA Columbus
June 10–28



5 Delineations
Lecture
Aug. 27

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4 What's Up, Doc?
AIA.org
June 20

1 London Calling. If, for some reason, you're not attending the 2013 AIA National Convention in Denver this month, and instead happen to find yourself in London, the London Festival of Architecture (LFA) is a sure bet. LFA matches the usual building tours, lectures, and events with "LFA Fringe," a series of separate programs organized by individual firms and artists. Now in its ninth year, LFA is sponsored in part by RIBA London, New London Architecture, the British Council, and the Architecture Foundation.

↗ Learn more at *londonfestivalofarchitecture.org.*

2 Happy Campers. Ah, summer. For kids, the word evokes warmer weather, beach trips, and the drone of cicadas. Most of all, it means no school. For parents, it evokes an early-spring scramble to jury-rig daily activities for their kids during the work day. Camp continues to be a good solution, and a camp that addresses the built environment is surely the best solution of all. During most of the month of June, AIA Columbus will hold its annual Camp Architecture for grades 3–5 (June 10–14), grades 6–8 (June 17–21), and grades 9–10 (June 24–28) at Arch City's own Center for Architecture and Design.

↗ Learn more at *aiacolumbus.org.*

3. Bare Bones. Wood, steel, and bronze are elemental materials in the sense that they're easily recognizable in their raw forms, but also easily transmuted so that they are barely recognizable. For James Surls, a native Texan and sculptor (by way of Cranbrook and, now, Colorado), to disguise wood, steel, and bronze is to abuse and diminish them. His work—largely composed of familiar forms in the landscape such as stalks and leaves, crystalline snowflakes, or a simple cabin—operates at a variety of scales and, in this way, speaks directly to the work that architects undertake. Join AIA Houston to celebrate Surls, its 2012 Artist of the Year, with an exhibition at the Architecture Center Houston, June 13–July 19.

↗ To learn more, visit *aiahouston.org.*

4 What's Up, Doc? Do you have a small commercial or residential project and are unsure which AIA contract is most appropriate? Click over to the new "Guide to AIA Contract Documents for Small Projects," available starting June 20. Developed with input and recommendations from small project practitioners and residential practitioners, this guide is sure to become an essential resource.

↗ Download your free guide at *aia.org/contractdocs/smallprojects.*

5 Delineations. In her teaching and public lectures, Sacramento-based architect Linda Kiisk, AIA, explores the phenomenological aspects of design: how artists see, how artists interpret what they're seeing, and how artists translate that perception into work. Kiisk will speak later this summer on the act of drawing, and she will also orchestrate an audience drawing session that will measure perception and response. "Sight Design: How Architects Learn" is presented by AIA Redwood Empire and the AIA Custom Residential Architects Network.

↗ Learn more at *aiare.org.*

IMAGE 3: JAMES SURLS, KNOT AND NEEDLE, 2007; BRONZE AND STAINLESS STEEL. PHOTO ©ROBERT MILLMAN PHOTOGRAPHY

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CHARLES HAERTLING, BRENTON HOUSE. PHOTO: JOEL HAERTLING

"DENVER? YOU'LL LOVE IT! DENVER IS THE ATLANTA OF THE WEST!"

That's what an architecture dean told me once when he was trying to entice me to move to the Rocky Mountain metropolis. He was a distinguished urban planner, but his pitch hit the wrong note. Both cities are state capitals and the economic hubs of their respective regions, but the comparison struck me as a little uneven.

To this historian of cities, Atlanta in the 1970s was a skyline of corporate towers. Beyond the exposed glass elevator designed by John Portman, FAIA, I was hard-pressed to conjure up a specific image that represented the city's architectural identity.

Denver, on the other hand, taps into a set of older American images. Cowboys and cattle drives, the Unsinkable Molly Brown and the adorable Baby Doe, and those magnificent Rockies. And not least of all, Denver created the body of avant-garde architecture that had a starring role in Woody Allen's science-fiction satire *Sleeper*. The Denver of this 1973 dystopian comedy appeared to be leagues ahead of most American cities of the time. Even though the film was set in 2173, the buildings in it were real. Architects in Denver had seen the future and had built it.

Sleeper's protagonist was Miles Monroe, played by Allen, a Greenwich Village health food store owner who goes into the hospital for an ulcer operation, unaccountably dies, and is cryogenically frozen. Defrosted two centuries later, he emerges in a police state where programmed humans live a vapid existence while being waited upon by robots. A few revolutionaries hope that an outsider such as Monroe can save them, specifically by thwarting the cloning of the departed dictator, whose nose has been kept alive. Allen's character is helped by Diane Keaton as Luna, a Rod McKuen-inspired poetess who has a degree in cosmetic sexual technique and poetry. Their adventures inspire a series of slapstick visual gags, many of which involve interaction with Denver's outré architecture.

Woody Allen is the consummate urban creature. His films are paeans to cosmopolitan in-town life. *Manhattan*, after all, is one great love song to New York. Conversely, his movies are rife with his fear of the country and bugs—"moths on the screen door" and "a spider as big as a Buick." But his cities are older transatlantic ones: New York and London, Paris and Venice. His antipathy to Los Angeles is well-known. Asked to describe sleeping for 200 years, Monroe reports, "It was like a weekend in Beverly Hills."

So for his futuristic tribute to H.G. Wells, Aldous Huxley, and Fritz Lang, Allen wanted to film *Sleeper* in Brasilia. Oscar Niemeyer's formalist confections dropped into the Brazilian highlands after 1956 would have been the perfect backdrop for Allen's soulless state. Budget restraints, however, required a limited distance from Hollywood. Monterey, Calif., was under consideration, but he chose Denver based on the appeal of its far-out buildings, particularly Charles Deaton's Sculptured House. It turned out that Denver was a hotbed of expressionist architecture; to the New York–centric viewers of Woody's film, Denver appeared as exotic as the other side of the moon.

Deaton's incandescent, jack-in-the-pulpit-shaped house of 1963 is the signature structure of the film. The self-taught New Mexico native was primarily a stadium designer, but his free-form sculpture was doubly dramatic because of its spectacular mountain site. At the time of filming, the house was an empty shell. It was not completed until three and half decades later.

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Little bubble-top cars, presumably riding on air, are the mode of transportation in *Sleeper*, and they take us from funky houses to sterilized laboratories. The first house is not really a house at all, but the Church of the Risen Christ (1969) by James Sudler, FAIA. The Yale-trained Sudler was a fan of Le Corbusier and later teamed up with Gio Ponti, Hon. FAIA, to design the Denver Art Museum. Another church composed of white shells is Mile Hi Church in suburban Lakewood. In *Sleeper*, McDonald's golden arches get plastered over the entrance to this house of worship. (Mile Hi has been subsumed into a megachurch with an undistinguished white dome that dominates the skyline.)

The silent spaceship cars run alongside the Boettcher Memorial Tropical Conservatory, a modern homage to Joseph Paxton at the Denver Botanic Garden designed by Victor Hornbein, FAIA, and Edward White Jr., FAIA (Beaux-Arts Institute of Design, New York, and Columbia University, respectively). The wee cars also ride through what appears to be an underground parking garage. This handsome space with its beautifully rendered concrete walls and mushroom pillars is a street under the Currigan Exhibition Hall. The world's largest space frame makes an appropriately daunting setting for the scene where Allen and Keaton are fleeing the medical establishment with Our Leader's proboscis. (Currigan was torn down in 2002 to build the new Colorado Convention Center.)

Two other houses have starring roles. The Varner House, by Cornell-trained San Francisco architect James Ream, FAIA (designer of the Currigan), looks like a giant albino bat enveloping the sleepwalking guests who come to experience hitherto normal human emotions such as laughter or ecstasy by stroking a magical orb. Also from 1969 is the Brenton House by Charles Haertling, AIA, in the tritely named suburb of Wonderland Hills. The most biomorphic house in *Sleeper*, this globular polygon of polyurethane foam and wire was inspired by barnacles—a lifeform to which Haertling was intimately exposed while scraping Navy ships during World War II. The house invites comparisons with the concrete and prefabricated plastic Monsanto House of the Future built at Disneyland a couple of years earlier, except that Haertling's plasticity is more dynamic than that of the chemical company.

Who would have thought there'd be an entire school made up of Felix Candela, Hon. FAIA, and Neimeyer-like free-form concrete, a kind of futurist formalism in Denver? Perhaps there is something to be said for the design ethos of an open Western town away from the jaded coasts.

A New Yorker, I.M. Pei, FAIA, designed the most conservative architectural star in *Sleeper*—the National Center for Atmospheric Research (NCAR), where Miles and Luna go to steal the assassinated dictator's nose. One of the most successful buildings inspired by the Richards Medical Center at the University of Pennsylvania, designed by Louis Kahn, FAIA, this early 1960s landmark has aged the least, as Pei avoided the temptation to bend his concrete like origami. The NCAR building offers a handsome contrast to a bit of folded metal, the contemporaneous United States Air Force Academy Cadet Chapel by Skidmore, Owings & Merrill in Colorado Springs.

The Pei lab seems less dated now than the white structures in *Sleeper*. Yet, taken together, these buildings seem all of one piece and mark Denver as a place of freedom and architectural experimentation. Sprawling Denver, admittedly, is not the sort of city that would suit a flâneur such as Allen. But the film was prescient in tagging Denver as the kind of lively town that would welcome museums by such architectural wild men as Daniel Libeskind, FAIA, and David Adjaye, Hon. AIA.

The unbridled spirit depicted in *Sleeper* is exhibited at Denver International Airport, which was erected two decades after the film was made. Local lore claims that the tented roofscape of the terminal by Fentress Architects—with its unique Teflon-coated fiberglass—is an homage to the tepees of Plains Indians or respectful echoes of Rocky Mountain peaks. But let me suggest another interpretation: Those white organic forms are a continuation of, and a tribute to, the adventurousness of Denver architecture as captured by Woody Allen in *Sleeper*. —*William Morgan* AIA

Learn more about Denver-area architecture tours at *convention.aia.org*.

Above: *Agri Agency, the 2012 Fentress Global Challenge winner, by University of Edinburgh students Chi Hsiao, Hung-Yu Lin, and Po-Yu Chao, rethinks supply and demand between urban and rural areas.* Opposite: *DAL's 2012 "Micro House Ideas Competition" centered on the TAXI neighborhood development north of downtown Denver.*

The Big Idea

As ideas competitions continue to thrive, Denver architects keep design in the public eye. BY ALAINA GONZALES

ARCHITECTURAL IDEAS COMPETITIONS ARE EVERYWHERE AND some may say hard to distinguish from one to another, but they remain crucial for stimulating new ideas about good design, engaging industry members, and creating a dialogue with the public. Two groups of Denver-based architects—the Denver Architectural League (DAL) and Fentress Architects—have hosted a series of global competitions over the last few decades that have marked the Mile High City as a nexus of innovation, with a particular emphasis on emerging professionals.

In 1986, an economy slowly recovering from recession helped spur 10 young Denver architects to found the DAL. "We were getting bored," says Jeffrey Sheppard, AIA, principal and co-founder of Roth Sheppard Architects. "We weren't being stimulated, so we initiated the competition to stay motivated and excited about design. We were then able to convince the landlord of a downtown high-rise to let us turn the lobby into a gallery, and 400 to 500 people—architects, designers, artists, developers, the public, and local media—attended the opening reception."

After the success of the initial competition, DAL had intended to host a competition every year. "It's amazing how quickly two decades goes by. We never quite got it together," Sheppard recalls. "But in 2011 we saw a need once again. We were just beginning to see signs of the economy's recovery, so we initiated the Micro House Ideas Competition to re-energize emerging professionals and the community," he explains.

The competition garnered 100 entries, mainly from Colorado, divided equally between students, recent graduates, and young professionals working in firms. Local media, international blogs and websites, as well as AIA Colorado and its local chapters, helped spread the word.

Rather than wait another 25 years between competitions, DAL members decided to host them biennially. AIA Denver sponsored the 2011 competition and a second one in 2013, allowing DAL to present cash prizes. This year's ideas competition, based on an expanding typology—micro housing—"was inspired by a concern about the lack of innovation evident in Denver's existing multifamily housing market, where many banal buildings are springing up," Sheppard says. "With this competition, designers have the opportunity to explore the future, question the past, and reinvent the notion of responsible, affordable housing."

DAL members Sheppard, Michael Brendle, FAIA, and Kimble Hobbs, AIA, worked with the University of Colorado Denver College of Architecture and Planning to get students involved in the rebooted DAL competitions, which offer students an opportunity to compete against professionals. Several studios selected it as an alternative project.

The 2013 Micro House Ideas Competition is based on hypothetical conditions (not for sale or scheduled for development) on a real site across from the TAXI development in Denver's thriving mixed-use, semi-industrial River North neighborhood. The program consists of eight housing units, along with requirements for an entrance identity for the TAXI community; public access to the river for recreation; affordable design; modularity and prefabrication; "thriveability" as it relates to natural ecologies and human activity; and appropriate uses of technology, materials, and building systems. Each unit must be no larger than 375 gross square feet, and designers are encouraged to foster community interaction and connection.

Future Focused

The annual Fentress Global Challenge is an international design competition created to engage students worldwide in the exploration of future possibilities in public architecture. Instituted in 2011 and administered by Denver-based Fentress Architects, it operates for the sole benefit of architecture students. While the Fentress competition began near the tail end of the global credit crisis, the firm focused on creating a creative outlet for participants, rather than designing solutions for economic recovery. Still, the Great

Recession may have contributed to the remarkable number of responses to the competition: In the two years that the competition has occurred, students from more than 70 countries have responded to the call for entries.

"We started the Fentress Global Challenge to promote advancement of the design profession; it provides one way for our firm to give back," says Michael Winters, FAIA, principal and director of design and interiors at Fentress Architects. Part of giving back is the competition's perennial focus on public architecture, which is one of Fentress's areas of expertise. In 2010, AIA honored Curtis Fentress, FAIA, with the Thomas Jefferson Award for Public Architecture. The Fentress Global Challenge demonstrates the firm's commitment to furthering the mission of the Jefferson Award, by furthering innovative design in public architecture.

In 2011, jurors reviewed 200 innovative solutions from around the world on the topic "Airport of the Future." Designs were evaluated by their creativity, responsiveness to site, sustainability, and functionality. To showcase the work of tomorrow's architects to the general public, the top three designs appeared in the traveling exhibition "Now Boarding: Fentress Airports + The Architecture of Flight," which has already reached over 100,000 museumgoers in Denver and Amsterdam, and at the Museum of Flying in Los Angeles (with companion exhibitions at L.A.'s Architecture and Design and Flight Path museums).

The second year's theme—Workplace of the Future—encouraged architecture and interior design students to consider the fundamental purposes of a workplace as well as future functionality and design. Again, Fentress received nearly 200 submissions. The winning project, by University of Edinburgh students Chi Hsiao, Hung-Yu Lin, and Po-Yu Chao, focuses on rural communities, rather than urban ones, in establishing a future workplace. So-called "intelligent farming" could optimize rural space through data crunching and adjusting land-use patterns according to a shifting set of economic and environmental factors that are linked to the nearby cities. It's a model that asks us to reconsider historically market-driven concepts such as supply and demand with a new mandate for sustainability, a model which could have a big impact on regional design practices in the coming decades.

Sustainability is a troubled concept, though. For DAL's Sheppard, it may have become an ineffectual industry buzzword. " 'Sustain' means to sustain what you are doing right now, but 'Thriveability' and 'regenerative design,' as approaches, transcend sustainability," Sheppard says. "We wanted to make this competition relevant. The single-family house has run its course. The goal is to make developers and consumers see that there are alternatives to traditional multifamily housing."

Fentress offers a different, firm-centric approach to fostering progressive design. "We started with airport design because that is one of our strongest areas of expertise, and we wanted to provide insight in our initial competition," he says. The Workplace of the Future challenge opened up the creative thought process by letting entrants explore theoretical ideas. The program stands apart from other competitions because, in addition to cash prizes, the firm offers internships to the competition's winner. "We want to aid in the development of students' careers by letting them work in a real environment," Winters says, "so that they have the opportunity to compare total creative freedom to the reality of practice."

Why a global competition? "Today, everything is global," Winters says, "and it raises the bar for students when they know they are competing with people from around the world."

The competitions have a reflexive benefit, as well, for their organizers. "They have energized and inspired us. They provide an opportunity to collaborate with other industry professionals," Winters says. "The desire to create innovative design is out there, and these challenges feed our creative appetites." AIA

The 2013 Fentress Global Challenge is accepting entries for "Upcycled Architecture." Learn more at *fentressarchitects.com*.

PHOTOGRAPH COURTESY ROTH SHEPPARD ARCHITECTS. OPPOSITE: RENDERING COURTESY PO-YU CHAO.

AIA PERSPECTIVE

THE EXAMINED LIFE

PHOTO: WILLIAM STEWART

A YEAR AGO, AT THE 2012 AIA NATIONAL CONVENTION IN WASHINGTON, D.C., the AIA embarked on a rigorous self-examination as the first step of our comprehensive Repositioning Initiative. Following the advice of our consultants, and in collaboration with our component network, we took a long hard look at ourselves that, in the course of the research over the summer and last fall, gathered over 31,000 information touchpoints from AIA members and interested parties.

The reflection that stared back was sobering: As a group, we aren't happy with our ability to effect positive change in society, and there is dissatisfaction with the professional community—the AIA—that represents us. We want to wield more influence in business, the community, and politics. We want a broader and deeper understanding of how architecture affects the quality of life. We want an AIA that's a respected advocate that tells the story of how our work improves people's lives. And we want to see the results of a commitment to identify and build emerging professionals into effective leaders. From this research, it's evident that there's a broad consensus for dramatic change.

Breaking old habits and stepping boldly out of our comfort zones won't be easy. It will be a challenge to implement the necessary changes to forge a new vision for the future of the profession that goes far beyond our previous realm of thought. But we can, and we will, do it—because we have to.

If there is one thing I learned as a student, a lesson I've seen demonstrated during my years in practice and as an AIA member, it is that each of us has a passion for architecture. Even during our most stressful days, we know that architects have the power to change what goes on in this country just by what we do. Our work transforms lives.

Think about the number of times you've introduced yourself at a cocktail party. What are the first words out of the mouth of the person you're talking to? "Man, I always wanted to be an architect!" We've all heard it, and it's powerful. That's because the public recognizes what we do is special.

The world's problems are going to be solved, for the most part, by design. Whether it's hunger, health, energy, or sustainability—all these and more touch directly on what we do. If we fail to act on our own dissatisfaction with the status quo, if we accept business as usual, if we say there are too few of us to make a difference, we will not simply slide toward irrelevance, but we will move there at warp speed.

That's why, as we meet one year later at the AIA Convention in Denver, I am more convinced than ever that the success of the AIA's Repositioning Initiative is vital to the healthy and prosperous future of the profession. Because what we do is important. It's why we get up in the morning; it's why we are so passionate about architecture.

There may be some who say that whatever we do won't make a difference either to the AIA or to world. To those who doubt the AIA's commitment to change or that change is even possible, we say: Never doubt that a small group of thoughtful, committed citizens can change the world. It's the only thing that ever has. *That's* what the Repositioning is about.

What will success look like? The next time I go to a cocktail party and introduce myself as an architect, someone in that circle will say, "Yeah, I'm an architect, too. And it's pretty damn fabulous!" AIA

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Text by **Jennifer Brite**
Edited by **Wanda Lau**

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City dwellers fortunate to have a backyard rarely have enough room for furniture. This space-saver from **Ego Paris** does double duty by serving as a low coffee table and as a dining table. The table top, available in Corian and aluminum, comes in eight colors, while the lacquered aluminum frame comes in 20 colors. The 129cm-long piece is 54cm wide when closed and 62cm when completely opened. *furniture-egoparis.com* Circle 101

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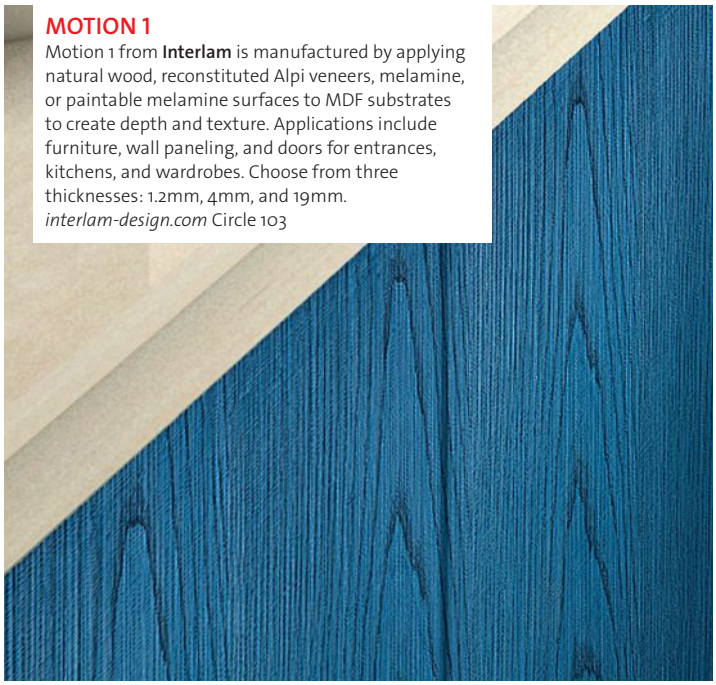

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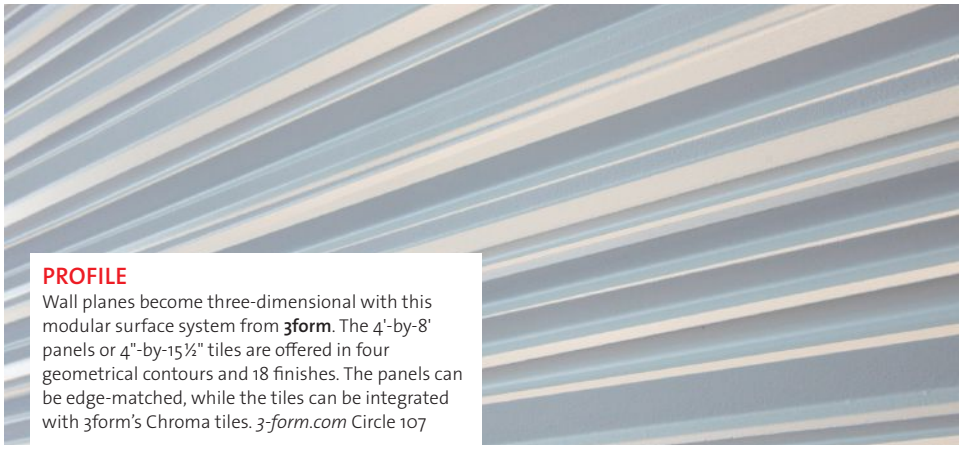

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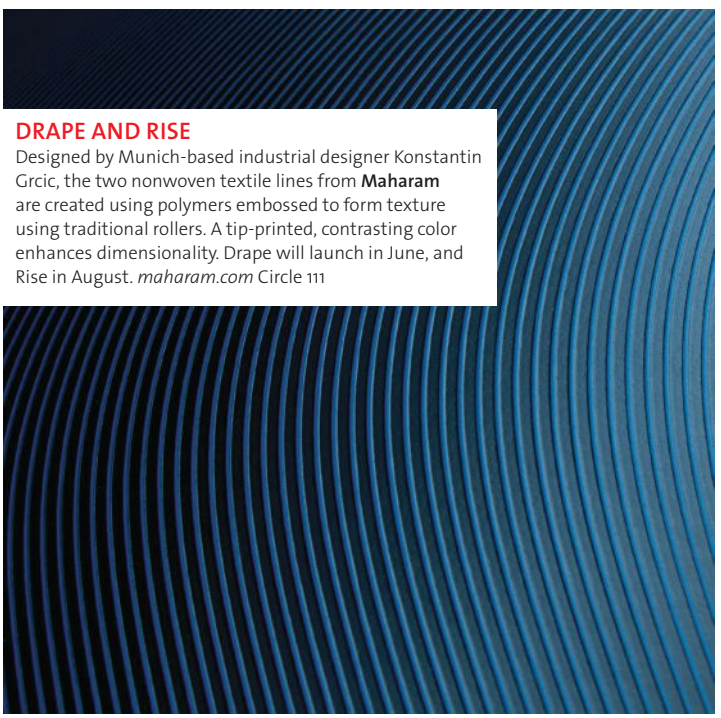
ARRAY

The Array seating collection—whose name comes from the concept of a matrix, or ordered pattern, found in the languages of computer science—uses geometry to create a visual effect that varies depending on the viewer's perspective. Designed by Zaha Hadid, Hon. FAIA, for **Poltrona Frau Contract**, the auditorium or theater seat folds diagonally upward when not in use to form a triangle with the back and base. Available this summer. *poltronafraugroup.com* Circle 110

DRAPE AND RISE

Designed by Munich-based industrial designer Konstantin Grcic, the two nonwoven textile lines from **Maharam** are created using polymers embossed to form texture using traditional rollers. A tip-printed, contrasting color enhances dimensionality. Drape will launch in June, and Rise in August. *maharam.com* Circle 111



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ARCHITECTS' CHOICE

Design Hospital-ity

STUDIES INDICATE THAT PATIENTS RECOVER FASTER IN HEALTHCARE ENVIRONMENTS WITH ACCESS TO NATURAL LIGHT AND VIEWS. FOUR DESIGNERS HAVE FOUND PRODUCTS THAT PROMOTE PATIENT COMFORT WITHOUT STRESSING PROJECT BUDGETS.

Text by **Brian Libby**
Illustrations by **Peter Arkle**

MYKAISER MOBILE APP–CONTROLLED PATIENT ROOMS, KAISER PERMANENTE

Today, hospitals want to make patients both more comfortable and more accountable for their own care. "There was a time when people showed up at hospitals and people took care of them. We've tried to change that culturally," says architect James Kolb, a principal at Gresham, Smith and Partners. "We want them to have control over things." In 2012, the firm was named a finalist in Kaiser Permanente's "Small Hospital, Big Idea" competition for a 96-bed, 225,076-square-foot "hospital of the future." Its submission included MyKaiser, a mobile app that acts as a room control interface and communication tool. With the app, patients can adjust room temperature, switch the television channel, and change the artwork display and color of the room's LED lighting. An interactive wall allows patients to "hang" their own artwork or family photos, and to engage in Skype consultations with a physician. "When a patient is under all the stress of a medical calamity, a lot of the issues are related to not knowing," Kolb says. "By engaging the patient in the hospital and making them an active partner, they'll take more responsibility for their care." Kaiser is developing the prototype app for use in its hospitals.

JAMES KOLB
Principal, Gresham, Smith and Partners

DIGITAL IMAGING WALL COVERINGS, MAHARAM

In spaces without windows, images of natural settings or fractal patterns can help lower patients' anxiety and blood pressure. For several interior rooms at the Los Angeles Center for Women's Health, HMC Architects used large-scale prints and wall installations by Maharam to add vibrancy. The waiting rooms and other public areas showcase images from the Maharam Digital Projects series. Available in sizes exceeding 10-by-16-feet, the latex-reinforced substrate polymer prints feature abstract patterns or natural scenes by renowned artists, illustrators, and photographers. "They're durable, they're easy to maintain, and they're washable," says HMC principal and interior architecture director Pam Maynard. Although the Maharam Digital Projects images come only in this material, the company also offers the same printing technology—using customer-supplied images—in a variety of plastic-free versions, including a canvas that meets Greenguard indoor air quality strictures or LEED for Healthcare guidelines. HMC chose plastic-free versions with an emphasis on natural imagery for a windowless stress-testing room and an infusion room.

PAM MAYNARD
Principal and Director of Interior Architecture, HMC Architects

VITRACOLOR MAGNETIC MARKERGLASS, SKYLINE DESIGN

Good healthcare design also fosters patient engagement and participation in the healing process. For the Winthrop-University Hospital Research and Academic Center in Mineola, N.Y., a teaching and treatment facility that is under construction, Perkins Eastman sought to make interaction among doctors, students, staff, patients, and visitors a potentially public event. In a series of amenity spaces—congregations of sofas, chairs, and tables—throughout the hospital's public areas, the architects added a succession of Vitracolor Magnetic Markerglass walls by Skyline Design. The writing surfaces are equipped with marking pens, allowing the hospital's researchers, instructors, medical students, doctors, and nurses to discuss cases with each other and with patients, privacy and confidentiality permitting. Some of the glass is also magnetized so paper items can be posted to the surface. "They can literally start doodling on the walls," says Perkins Eastman associate principal Evan Weremeychik, AIA. "It's deliberately done in a more public zone so people can join in." The inspiration was Bell Labs, which "had a policy that no one could close their door. It led to unusual collaborations."

EVAN WEREMEYCHIK
Associate Principal, Perkins Eastman

NYLON DOOR STRIKE INSERT, FALCON LOCKS

A common challenge for overnight patients is getting adequate sleep—a necessity for convalescence. Even if a doctor or nurse doesn't intend to wake someone, a clicking door latch can be the difference between a meaningful night of rest and a series of catnaps. That's why Indianapolis-based firm BSA LifeStructures chose a simple nylon door strike insert for patient rooms at the St. Good Samaritan Regional Health Center in Mt. Vernon, Ill. When a nurse or doctor enters the room, often with his or her hands full, "they'll use their hand or body to open the latch, which makes an extra loud popping sound," says Derek Selke, BSA's director of architecture. "This insert quiets that pop down." Although BSA chose Standard Strike model 1279 by Falcon Locks, it's a product that several manufacturers offer. "It's just a small thing," Selke says. "But when you talk about noise control in a healthcare setting, it's a big issue."

DEREK SELKE
Director of Architecture, BSA LifeStructures

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Polar Opposite

SIMPLE DESIGN DECISIONS ARE NOT SO SIMPLE WHEN BUILDINGS FACE PERPETUAL ISOLATION, WIND, AND SUB-ZERO TEMPERATURES.

Text by **Rose Eveleth**

JUNE MARKS THE START of winter for half of the world. But while Americans sample gelato and sprawl on beaches, researchers and staff at the Halley VI station huddle inside colorful pods, longing for the sight of daylight. When you're positioned on the Antarctic ice sheet, indoors is the place to be. The pods are not only shelter from the brutal cold, but they're also architectural marvels.

"Think of it like a ship or an aircraft or a space station," says Hugh Broughton, director of London-based Hugh Broughton Architects (HBA), which built Halley VI. From siting to material selection and maintenance, architecture in the extreme cold is indeed a different world.

For starters, the project is sited on 150 feet of ice, beneath which is the ocean. Rather than dig in, the 16,254-square-foot Halley VI rests atop skis attached to hydraulic stilts made by Titan Engineering. The elevation helps to hold the pod above the 10- to 12-foot snowdrifts that buried and destroyed the three previous Halley research stations.

Meanwhile, at the Earth's other pole, the Barrow Replacement Hospital on Alaska's northernmost tip faces a different site constraint. RIM Architects and HDR had to design the 100,000-square-foot hospital on permafrost—or ground that stays frozen year-round. Should the building, when in operation, inadvertently melt the ground, it will sink, says James Dougherty, AIA, RIM's managing principal. Consequently, Barrow also sits on stilts, rising 4 feet high.

For weather protection, Halley VI uses windows triple-glazed with Okalux's Okagel panels, which have a U-factor of 0.113 W/K-m^2. But it's not just the cold that must be kept out. For instance, RIM oriented Barrow to align with the wind to keep snow from piling up, and minimized building seams to prevent tiny snowflakes from working their way in.

Should anything break, another problem arises: getting supplies. Access from the sea is only possible for a few months per year, so architects must minimize the different building components to simplify storage of spare parts. Lighting is limited to one, maybe two, lamp types, which are used instead of multiple types. Equipment, such as boilers and generators, must have replacement parts and repair resources nearby. "[A] vehicle mechanic is retained on the site to look after the bulldozers, and they use hydraulics," Broughton says. "[So] we chose hydraulics."

MORE IMAGES AT ARCHITECTMAGAZINE.COM

A SENSELESS WORLD

Cold-weather buildings are constantly under stress, as are the occupants inside. Designers must replace the sensory input that long winters and constant darkness devour. For Halley VI residents, Hugh Broughton invented an alarm clock that gradually glows to simulate the breaking dawn. He also coated interior walls with scented Lebanese cedar veneer by Shadbolt International to mitigate the region's lack of vegetation.

To create a welcoming space for researchers, who spend an average of 15 months at the station, HBA brought in a color psychologist. Similarly, the designers of the Barrow Replacement Hospital seriously considered colors too. Both projects utilize a bright palette full of intense reds and greens and blues for the walls and furniture. "If you live in 24 hours of darkness, your body begins to crave color," says RIM Architects designer Molly Logelin, Assoc. AIA. —R.E.

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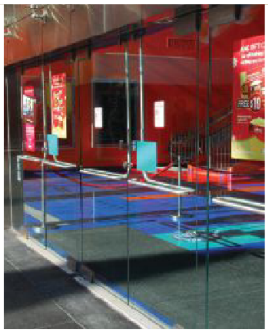

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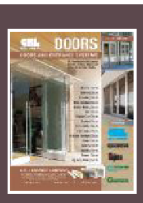

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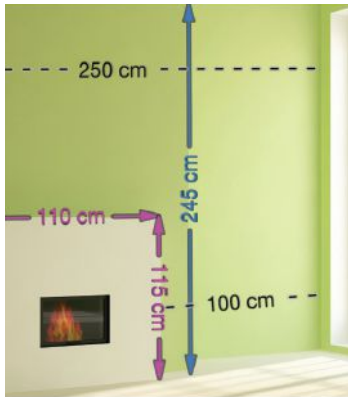
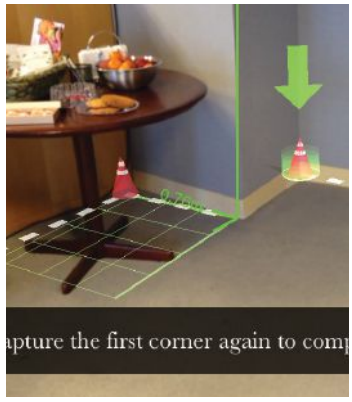
Text by **Heidi Moore**



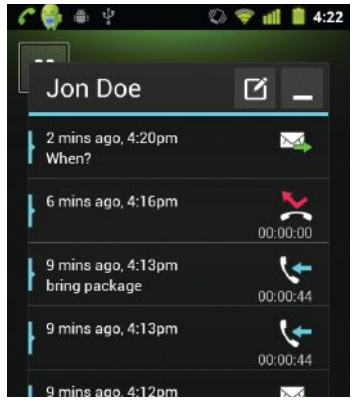
MY MEASURES & DIMENSIONS PRO, SIS SOFT

GOOD FOR: Field measurements PLATFORMS: iOS, Android (modified version) PRICE: $4.99–$5.99 Users on a jobsite can "snap a picture ... add dimensions, and then send [it] out to a supplier or carpenter," says Chris Denby, Marketitecture CEO. The app calculates angles, areas, and volumes based on the image and user-entered dimensions. *sis.si/my-measures*



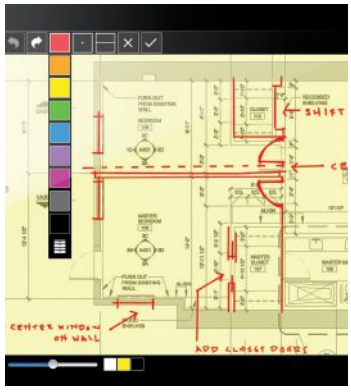
MAGICPLAN, SENSOPIA

GOOD FOR: Creating floor plans without a tape measure PLATFORMS: iOS (Android release anticipated in June) PRICE: Varies, depending on usage Take a photo of a space and drag a virtual grid to identify corners. Using augmented reality, a built-in gyroscope, and a camera, the app can generate multiroom floor plans with dimensions. But always check your measurements. *sensopia.com/english*



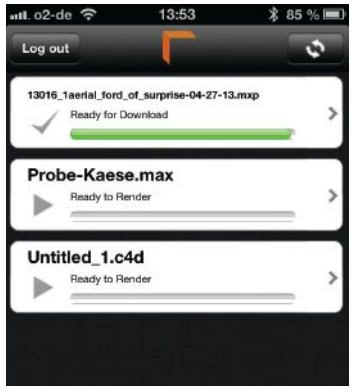
REFRESHME, REFRESHME

GOOD FOR: Communication, note-taking PLATFORM: Android PRICE: Free
Stop scrambling through your notes or hazy memory to remember outstanding action items when a client calls. This app tracks a contact and your conversations with that person by listing their SMS history with your meeting notes in an at-a-glance view. Then take more notes during the call. *getrefresh.me*



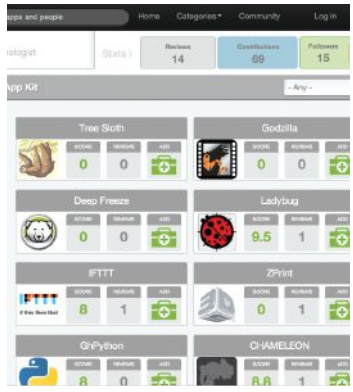
MORPHOLIO, THE MORPHOLIO PROJECT

GOOD FOR: Presentations, networking, inspiration PLATFORM: iOS PRICE: Free
This app allows design professionals to share work and exchange feedback. Post images and view curated galleries for ideas with the Pinup feature; track audience interest with EyeTime; modify projects with co-creators using Crit; and much more. *mymorpholio.com*



REBUS FARMINIZER, REBUSFARM

GOOD FOR: Production, modeling PLATFORM: Android PRICE: Free (account required and fee per gigahertz-hour)
Tap into the RebusFarm cloud-rendering service and monitor job progress from anywhere. "Using this has saved us a ton of time," says Eric Tinlup Ng, AIA, Marble Fairbanks. "Being able to farm out processing power ... frees up a computer and frees up a person." *rebusfarm.net*



AEC-APPS, SOM AND CASE

GOOD FOR: Social media, productivity, staying current PLATFORM: Web-based PRICE: Free (admin approval required)
This app repository links architects to peer-tested and -reviewed AEC-related tools to streamline their own workflows. Collect and share your favorite applications in an App Kit that other users can browse and follow. BIM 360 Glue, Workflowy, Podio, and Prezi are crowd favs. *aec-apps.com*

FIVE FOR THE LONG HAUL

If these tried-and-tested apps aren't on your mobile devices already, you might be missing out.

Evernote: Creates keyword-searchable notes, lists, and voice and audio recordings that sync across your devices. It's for anyone interested in increasing productivity. For iOS and Android devices. *evernote.com*

Penultimate: From the developers of Evernote, this handwriting app for the iPad allows users with a stylus to take notes and sketch in color. Access doodles and masterpieces from anywhere. Sync with Evernote to make information searchable. *evernote.com/penultimate*

AutoCAD WS: The cloud-based CAD editor from Autodesk lets users view, edit, and share AutoCAD files from anywhere with a Wi-Fi connection. For iOS and Android devices. *autocadws.com*

SketchBook Pro: The range of drawing tools and brush types, large color palette, and customizable interface distinguish this Autodesk app from the pack. For iOS and Android devices. *autodesk.com*

ARCAT: Access ARCAT's robust library of building product and material information on the go. Find nearly 11,000 manufacturer listings containing CAD details, BIM content, and specifications. For iOS and Android devices, as well as Amazon's Kindle Fire. *arcat.com* —H.M.

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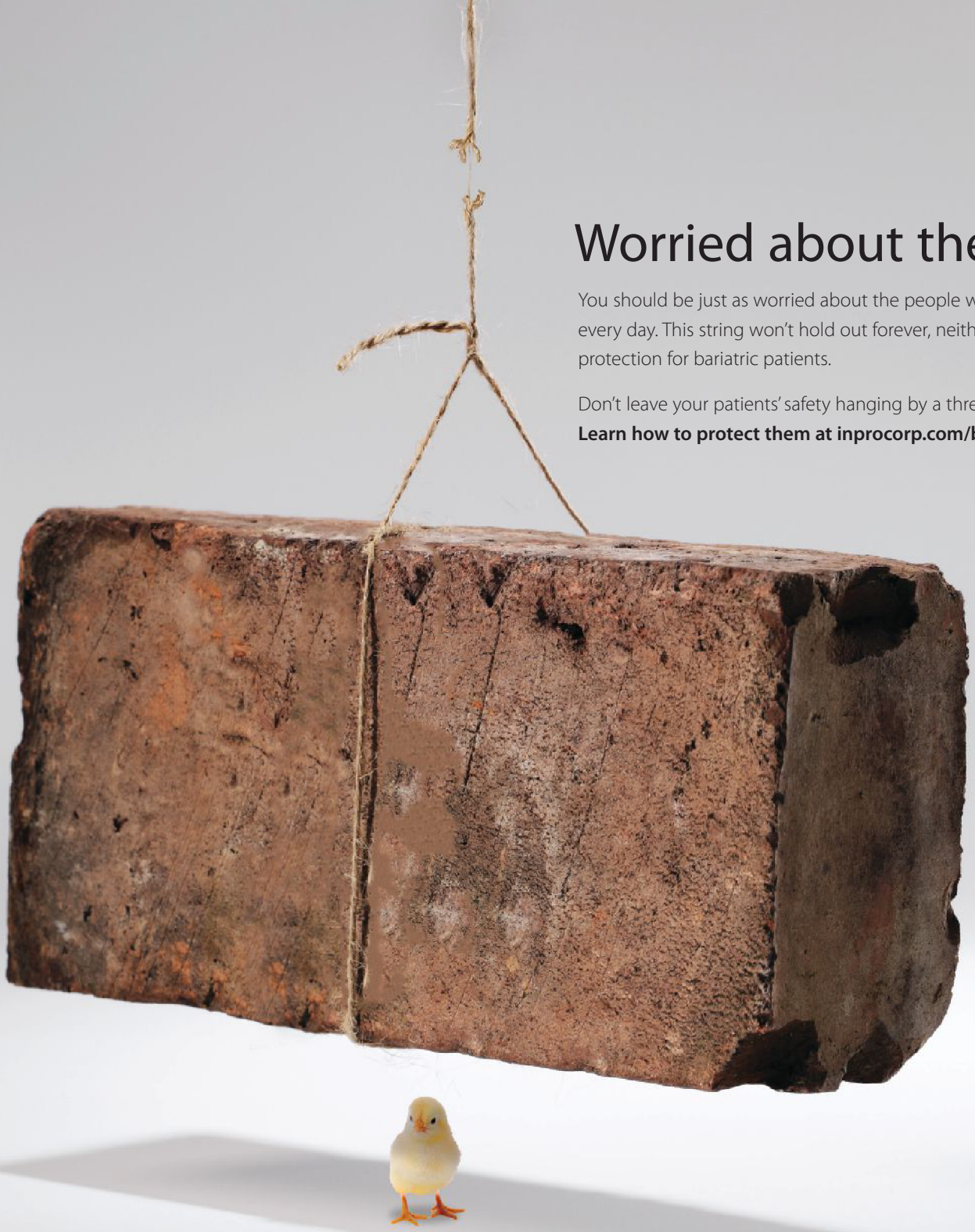

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At Macalester College, Minneapolis-based HGA Architects and Engineers collaborated with acoustician David Kahn to renovate a 350-seat concert hall that can be tuned for each performance.

DETAIL

Sound of the Times

AN ARCHITECT-DRUMMER AND ACOUSTICIAN-TRUMPETER UPDATE A 1960s CONCERT HALL WITH A VERSATILE ACOUSTICAL SHELL.

Text by **Logan Ward**

GOETHE FAMOUSLY COMPARED architecture to "frozen music," adding that "the influence that flows upon us from architecture is like that from music." When the design commission is a concert hall, how does one inject the aesthetic that inspired the German writer's apt metaphor while making the space sound good for a range of ensemble sizes and musical genres?

Steven Dwyer, AIA, senior project designer at Minneapolis firm HGA Architects and Engineers, and acoustical designer David Kahn of New York–based Acoustic Dimensions tackled this challenge at Macalester College's Mairs Concert Hall in St. Paul, Minn. Built in the 1960s, the 350-seat performance space was considered excellent—for chamber music. Over time, the campus music scene changed. Chamber orchestras now share the stage, figuratively, with jazz bands, a cappella groups, and the hard-driving beats of the popular African Music Ensemble.

To provide Mairs with the needed flexibility, HGA and Acoustic Dimensions designed an interior that can be "tuned" to accommodate all types of music, as part of a comprehensive redesign of the Janet Wallace Fine Arts Center.

The designers began by lining the interior walls of the hall's masonry structural shell with acoustical towers that comprise three stacking acoustical shelves, each 10 feet tall. The shelves

PAUL CROSBY

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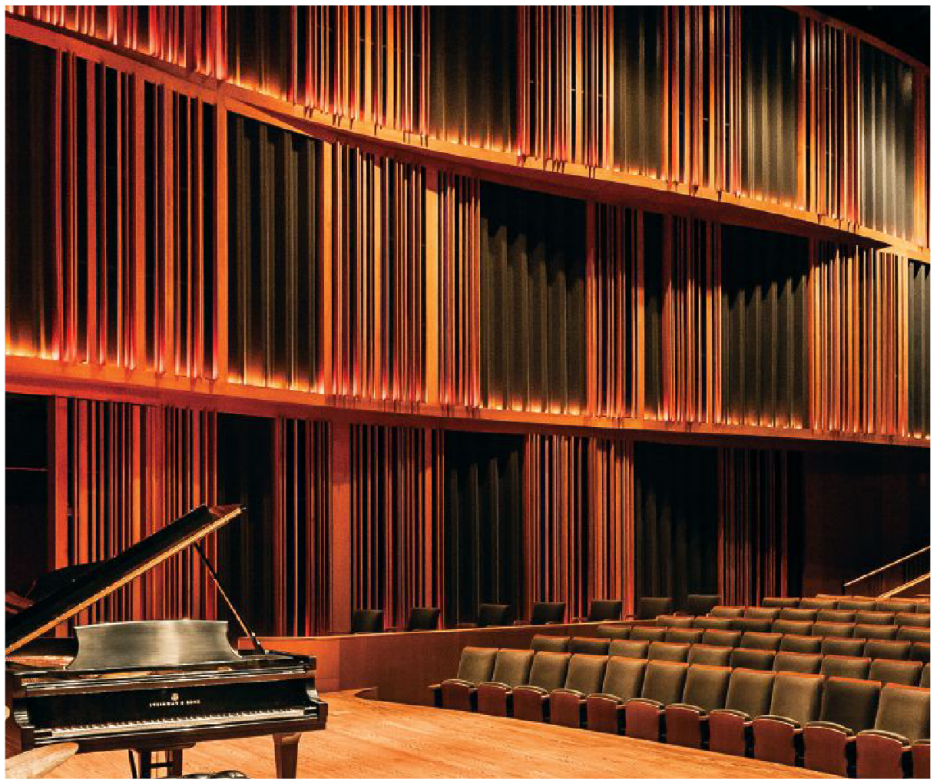
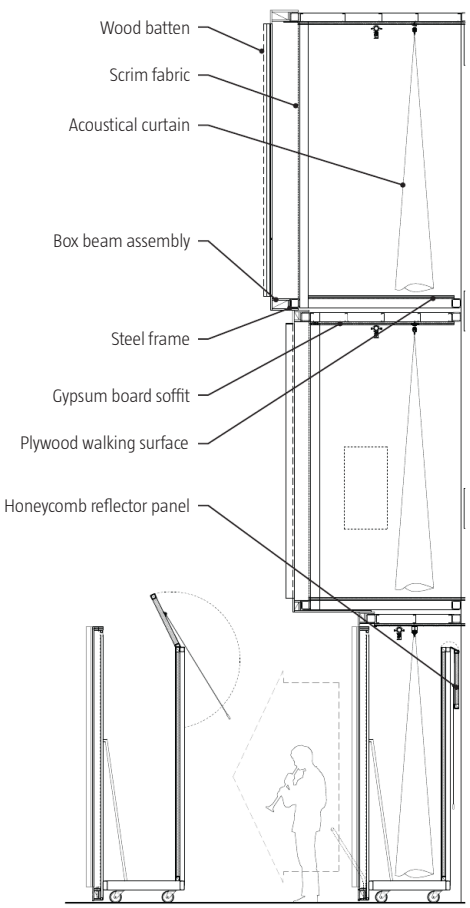


In arranging the seemingly irregular wood-picket veneer on the projecting soffits, HGA was inspired by the idea of the polyrhythm, in which musicians bang out beats in different time signatures that come together as a whole due to moments of coincidence.

Acoustical Tower Section



undulate and wind along the shell's walls, enveloping both the audience and performers like a "warm wooden cocoon," Dwyer says. The 1-inch-wide red oak pickets comprising the veneer vary by stain color, spacing, and depth—some jut out by 1 or 2 inches. Though the layout may appear random, Dwyer, a drummer since the third grade, emulated a polyrhythmic pattern similar to how members of a drum circle can follow distinct rhythms but maintain coherence through moments of coincidence.

Beyond aesthetics, the system is integral to the hall's acoustics. The shelves cantilever progressively further from bottom to top, directing the sound down to the audience. For more intimate concerts, the lowest shelf in the stage's back wall can roll forward in five movable partitions to ensure that the performers and their music aren't lost in the large space.

Velour acoustical curtains, built into the towers at each shelf level and hidden by a scrim, can help dampen sound when needed. But when a soloist takes the stage, the curtains can retract and tuck behind pocket walls, exposing a 2-inch-thick honeycomb reflector panel that helps fill the hall with reverberating sound energy. "Even though the room has all this acoustical flexibility, the wall system makes it visually consistent," Kahn says.

The acoustical towers house the acoustical curtains, wiring, accent lighting, and sprinkler piping, all concealed behind the sound-transparent scrims. Framed with tubular steel 4×4s, the stacking shelves are covered with an MDF and plywood armature, cut by local fabricators with a CNC machine. The veneer of vertical pickets, with corrugated metal mesh between spans, is primarily decorative, though it does reflect sound, particularly in areas where they are densely spaced, such as behind the stage.

Once the 18-month construction phase was completed, Kahn—himself a trumpeter who often self-tests his project's acoustics—worked with Macalester's music directors and ensembles to tune the space. As the musicians rehearsed, the team would adjust the curtains to fine tune the absorptive and reflective qualities of the towers. Together, they developed "a series of standard settings based on different types of use," he says. The 17-page "Adjustable Acoustics Report" provides guidance on 20 different performance scenarios, including "small vocal ensemble traditional" and "amplified music" both for small and large audiences.

Changing the tuning in between performances only takes about five minutes, Kahn says. "And at the end of the day, there's really no right or wrong. To a certain extent, the acoustical adjustments depend on taste." Though the manual provides recommended settings, he says, "we encourage building owners to experiment."

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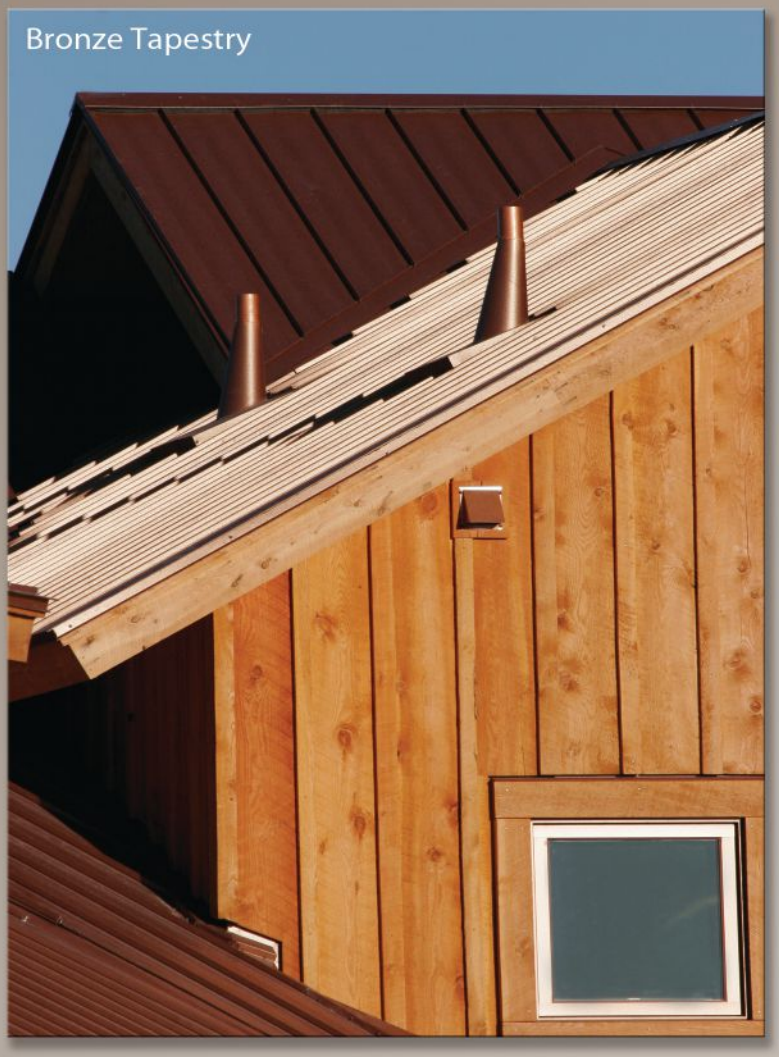
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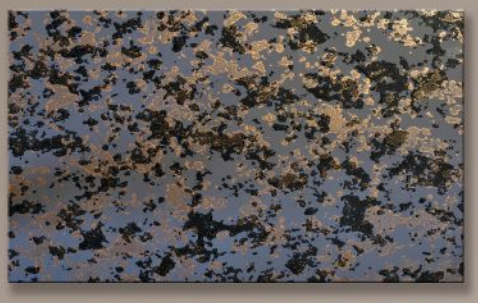
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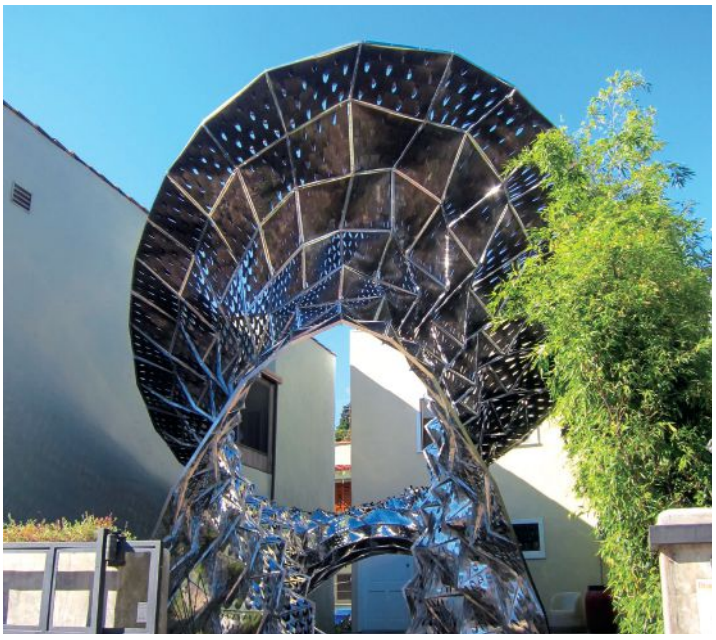

The Bloom pavilion, designed by Doris Kim Sung, is composed of panels made of two different types of metal that curl at different temperatures.

THE PHILOSOPHER ERIC HOFFER once said, "Creativity is the ability to introduce order into the randomness of nature." This outlook parallels historic attitudes toward the relationship of the made versus the born. The contrasting view—that nature is the source of creativity—is now gaining strength. Biomimicry, which advocates nature as a design mentor rather than a source for raw materials, has influenced many fields and taken form in strategies ranging from metaphorical to manipulative.

One tactic in which nonbiological materials and operations emulate biomimetic behaviors is exemplified by homeostatic architecture, which self-regulates to maintain a constant internal state. The Bloom pavilion in Los Angeles, designed by University of Southern California architecture professor Doris Kim Sung, Assoc. AIA, comprises gleaming panels of thermobimetal, a composite skin designed to shape-shift with temperature changes. Made from two types of sheet metal with different thermal expansion coefficients, the laminated sheet curls upwards as one of the metals expands at a faster rate. Although the transformation is unrelated to biology, the result is reminiscent of natural phenomena such as breathing or peeling skin.

Another approach is biodesign, or bioengineering, which writer William Myers describes as the engaged manipulation of living matter. In his Venus Natural Crystal Chair, Japanese designer Tokujin Yoshioka attempts to harness what he calls "second nature" by suspending a polyester fiber scaffold within a glass tank containing a mineral-saturated solution. Over one month, natural crystals materialized on the fiber skeleton, growing into the solidified, opalescent chair form.

Yoshioka attributes the process to two creators: the designer and nature. "[I]ts form is governed by natural processes," he says. "This production method highlights the boundary between the physical world and the world of the imagination. In this sense, the process broadens the boundaries of creativity." To be clear, the Venus Chair is not a product of biomimicry, which copies nature; nor is it representative of biodesign, which focuses on living organisms. Rather, I classify this approach as *geodesign* insofar as it demonstrates direct interaction with the mineral world.

Both biomimicry and biodesign require relinquishing control of the finished product, so the creative process is less focused on static objects, and more experimental and open-ended. Creativity, counter to Hoffer's belief, now welcomes some degree of disorder. Put another way: The act of making, when inspired by nature, is illuminating the nature of making.

414

The number of hyperbolic paraboloid–shaped stacked panels in Doris Kim Sung's self-supporting Bloom pavilion.

SOURCE: DO|SU STUDIO ARCHITECTURE

Text by **Blaine Brownell, AIA**
Illustration by **Peter Arkle**

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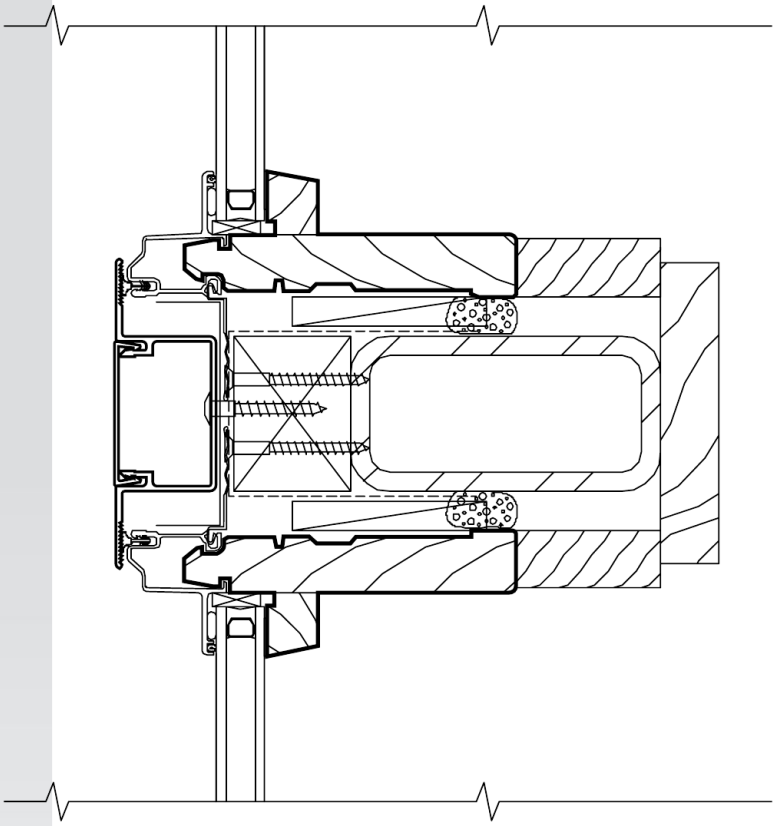

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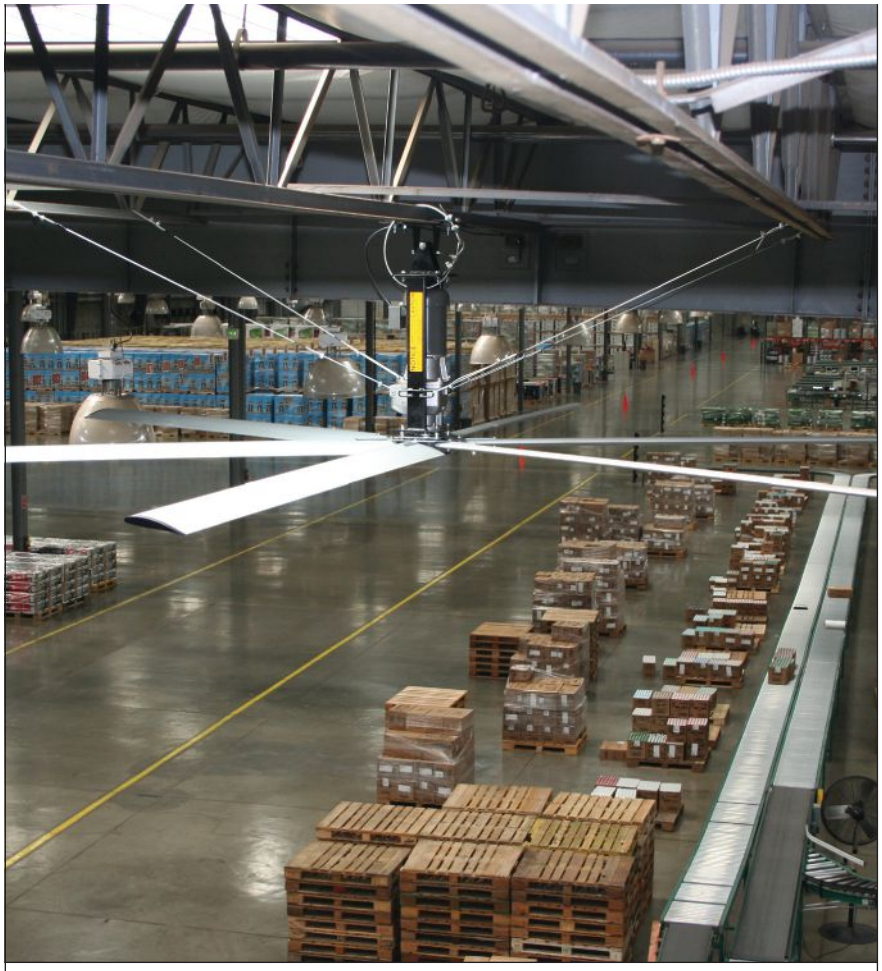
Presents:

HVLS Fans Come of Age:

Selecting non-traditional ceiling fans to improve comfort and reduce energy consumption.

By: Andrew Hunt



HVLS fans can range from 8 feet in diameter to 24 feet in diameter and can circulate more than 500 cubic feet of air per minute. (photo courtesy of MacroAir Technologies)

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LEARNING **OBJECTIVES**

By the end of this educational unit, you will be able to:

1. Discuss how air can be circulated, mixed, and de-stratified in rooms to increase comfort and improve energy efficiency.
2. Compare features of current small diameter/high-rotation ceiling fans to non-traditional style High Volume/Low -Speed (HVLS) fans.
3. Describe how selecting the appropriate HVLS fan for projects will take into account obstructions, room size, and overall comfort and energy conservation goals.
4. List the advantages of selecting HVLS fans for commercial applications.

It is safe to say that a comfortable work space is a productive work space. According to a study conducted by the U.S. Department of Energy, as the temperature rises, productivity decreases an average of 2 percent for every degree over 77 degrees Fahrenheit. In practical terms, this means that keeping cool can make both the worker and the bottom line happy. (http://www.osti.gov/bridge/servlets/purl/886957-yDXcC7/886957.pdf)

One of the oldest and easiest ways to increase comfort in the work space is by circulating air with fans. Gentle moving air breaks up the moisture-saturated boundary layer surrounding the body – accelerating evaporation to produce a cooling effect. Historically, large slow-moving fans were used everywhere, from parlors to palaces, to create a gentle breeze and cool the occupants.

But with the advent and mass production of the electric motor, smaller fan units became commonplace. Over the last century, small personal fans have popped up on desks and have been ceiling mounted with ever-increasing fan blade rotations that can generate wind speeds over 60 miles per hour. Manufacturers believed that the greater the air speed, the more comfort fans could provide. However, when it comes to true comfort, faster is not better. Air speeds beyond four or five miles per hour usually offer little, if any, additional cooling benefit. Instead, high speed fans can create additional noise, distraction, and often prove to be ineffective in mixing air in large work spaces or rooms with high ceilings.

Today, architects and engineers have the opportunity to go "old school" and select air circulation units that are more akin to the cooling strategies of the past. High Volume/Low-Speed, or HVLS, fans generate gentle breezes and circulate larger volumes of air with each blade rotation than standard high speed fans. The result is that in large spaces with high ceilings, HVLS fans provide an air circulation solution that is more effective and energy efficient while avoiding the common disadvantages of high speed fans.

This graphic shows how air temperatures can stratify, or organize into layers in a room. Note that the brown layer centered represents fan placement prior to blade rotation.

Smaller diameter/high speed fans

Model	Fan Dia (ft)	CFM	RPM
Shop Fan 2'	2	6100	1075
Shop Fan 3'	3	14000	460
Shop Fan 4'	4	21000	355
Traditional Ceiling Fan 4' 8"	4.67	5390	280
Traditional Ceiling Fan 5'	5	9630	258

HVLS fans

Model	Fan Dia (ft)	CFM	RPM
HVLS 8'	8	34083	179
HVLS 10'	10	44053	129
HVLS 12'	12	56074	95
HVLS 14'	14	75535	90
HVLS 16'	16	88106	72
HVLS 18'	18	112140	66
HVLS 20'	20	122638	53

SECTION 1: THE SCIENCE OF AIR CIRCULATION

While having an advanced degree in fluid dynamics is not necessary to successfully choose a fan, a strong working knowledge of how air flows in large rooms and the advantages of a well-designed mixing and circulation strategy is important. To understand why HVLS fans are a superior choice for keeping occupants comfortable in large workspaces, this section will provide a brief summary of the science behind air movement.

In large rooms and when undisturbed, air temperatures will stratify into different temperature layers with relatively cooler temperatures near the floor and warmer temperatures near the ceiling. Although you may have heard that "heat rises," the actual reason for this stratification is that warm air is less dense than cool air. It is the density of the air, not the temperature of the air, that creates warm ceilings and cold floors. Depending on the size of the room and the height of the ceiling, the temperature difference between floor level and rafters can be as much as 8 to 12 degrees.

Did you know that the Boeing Aircraft Factory in Everett, Washington is the largest building in world when measured in volume (472,000,000 cubic feet)? The interior is so large it creates its own climate and clouds have been known to form within the building. Talk about air stratification!

Air stratification in a room can result in high energy bills because much of the conditioned air created by the heating or cooling system is not efficiently delivered to the occupants. This creates a work environment that may be uncomfortably warm or cool and may require the HVAC system to work overtime to compensate. By employing a successful air circulation strategy, work spaces can be destratified: the warm and cool air are mixed and the conditioned air is distributed as intended.

To effectively mix the air levels in a room, fans are used. The rotation of the fan blades either "pushes" the air from the ceiling down or "pulls" air up through the spinning blades. Fans can best be evaluated by the amount of air they displace or circulate in one full rotation of the blade. The volume of air displaced is measured in cubic feet per minute (CFM).

The typical method of measuring the CFM a fan unit can produce is to measure the thrust, or force, the fan creates. Measuring the thrust of a spinning fan is done by using sensitive pressure sensors mounted above the blade. Once the thrust is measured, other data such as the diameter of the blade rotation, speed of fan measured in rotations per minute (RPM), and airspeed are used to calculate the volume of air the unit can move.

Measuring the CFM of a very large-diameter fan is challenging. Because of the diameter of the fan blades there are few facilities with enough space to properly test HVLS fans. Unlike traditional high speed fans that will generally have a maximum 48 inch blade diameter, HVLS fans can range from 6 feet to 24 feet in diameter.

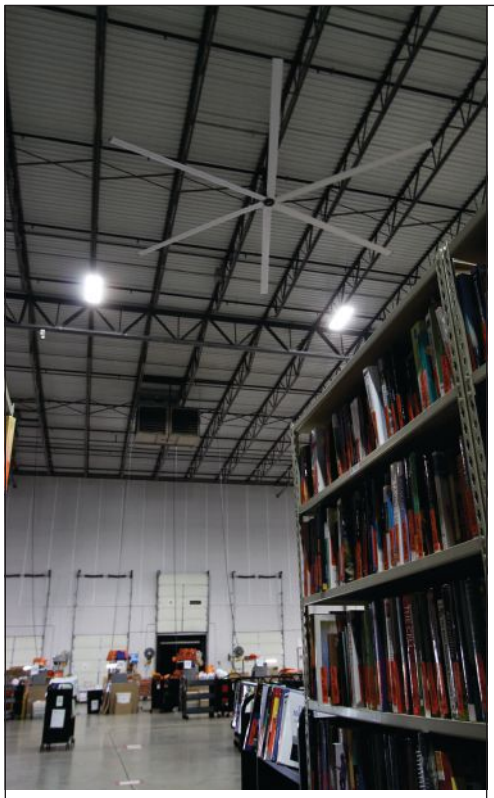
Although many fan manufacturers may establish testing facilities to evaluate their fans, there is a third party that offers a more reliable CFM evaluation rating. The Air Movement and Control Association International (AMCA), http://www.amca.org/ is the professional organization that certifies fan performance. When selecting fans, it is important to seek third party validation of proposed data in order to ensure that expected results of air destratification can be met by the product.

The charts above offer some perspective on fan size, CFM, and RPMs of various units on the market today.

While it may seem that the greater the CFM, the more air is displaced and the greater the volume of air in the room can be mixed, there are other factors to take into account including blade diameter, obstructions, and wind speed.

Air that is pushed downward by ceiling fans will flow down as a column of air and then spread out along the floor in all directions. The size of the column of air is directly proportional to the diameter of the fan. The diameter of a fan unit is generally measured from the furthest point away from the center that the blade passes while completing a rotation.

Also important is the fact that a large column of air travels farther than a small one. The science behind this



Obstructions, like the shelving pictured here, can greatly reduce the effectiveness of air movement generated by fans. However, larger downward air columns and deeper horizontal floor jets can overcome obstructions at floor level.

phenomenon involves friction on the perimeter of the air column. Resistance between the moving air particles and the stationary air particles will slowly reduce the speed and impact of the air being pushed by the fan. Because larger diameter fans generate much larger columns of moving air than smaller high speed fans, there is less surface area on the outside of the air column to absorb the friction. The air column from a 3-foot diameter fan has more than 6 times as much drag per cubic foot as the air column from a 20-foot diameter fan. The ratio of the overall amount of air that is moving within the column compared to the outside surface provides less surface area to slow down the column. The result is that HVLS fans produce more air movement that can travel farther than the air movement produced by smaller fans. The air column from a 3-foot diameter fan has more than 6 times as much drag per cubic foot as the air column from a 20-foot diameter fan.

For the occupant working in a large room with high ceilings, what this means is that an HVLS fan can generate a large column of air that gently flows down to the ground and outward along the floor plane in all directions. The movement of air away from the downward air column is called the "horizontal floor jet". To achieve maximum destratification or mixing of the air and provide comfort to the occupants, the horizontal floor jet should be as deep as possible. The depth of the floor jet is a direct ratio to the size of the column of air when it comes in contact with the floor. So, even if the air column from a high speed fan can overcome the drag and perimeter friction of the stagnant air mass, once the column collides with the floor it will generate only a very shallow horizontal floor jet because the diameter of the column is relatively small compared to the column of air produced by an HVLS fan.

In terms of comfort, this means that in order to benefit from the generated air movement of a small-diameter high speed fan you must be directly under the unit while it is in operation. With a large diameter fan, however, you not only have a larger downward air column that provides air movement, but also a much deeper horizontal floor jet that can provide cooling to all areas adjacent to the downward air column.

Obstructions can limit the effectiveness of fans and the destratification of air

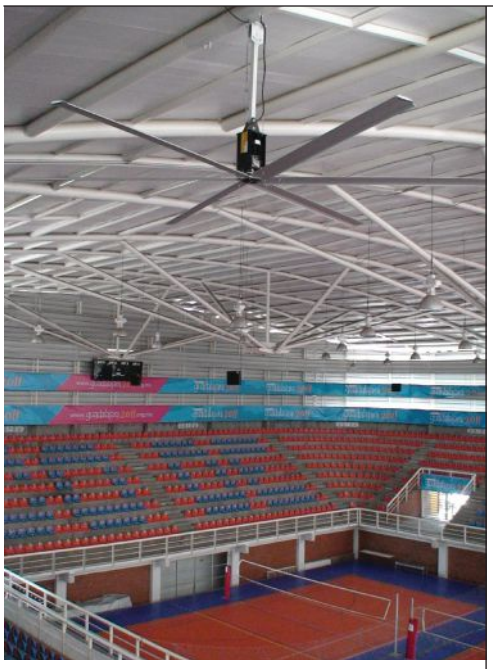
Slow moving fans make full rotation

Large slow moving fans have been used for centuries to provide comfort to individuals in hot and humid climates. In Japan, hand-held fans were incorporated into style and dance and later were shared with Chinese culture. Likewise, the historic portrait of the Southern Belle of America's Deep South almost always includes a hand-held fan. Slow moving ceiling fans were often featured in classic black and white movies such as "Casablanca" and provided a sultry backdrop to drama and intrigue. During the British rule in India, servants would cool the upper class using foot-powered punkas, and this long, sweeping style fan was imported to the parlors of the Deep South before air conditioning was available. Probably the oldest recorded personal fans date back to ancient Egypt, where hieroglyphics show servants fanning the Pharaoh with palm fronds attached to long handles. In fact, a golden fan was discovered in King Tutankhamen's burial chamber.

With the advent of the electric motor, personal hand-held fans were quickly replaced by small desk-sized units that offered push-button comfort. The first electric fans were two-blade models introduced in the 1880s, and have since become cheaper, faster, and more effective. Electric fans were—and are—essential in work areas where air conditioning is unavailable.

Research done by the U.S. Department of Energy (DOE) has shown that when a building's occupant uses a ceiling fan and air conditioning together, the thermostat setting can be raised about 4°F with no reduction in comfort. In temperate climates or during moderately hot weather, ceiling fans may allow the occupant to avoid using the air conditioner altogether. http://www.nrel.gov/docs/fy01osti/29513.pdf

But are today's faster blades and higher wind speeds superior to old school style gentle breezes? Air moving across the body removes heat through the process of convection. If the surrounding air is cooler than the skin, the air will absorb the heat and dissipate. As the warmed air is displaced, cooler air moves in to take its place, absorbing more heat energy from around the body. This process is usually called "wind chill." The stronger the breeze, the greater the overall reduction in heat. From a comfort standpoint, a gentle breeze will provide ample air movement to remove excess body heat without the annoyance of a strong wind. The ideal breeze should be almost unnoticeable to occupants while it removes the heat.
This was the secret of slow moving fans centuries ago, and still holds true today. To maintain a comfortable living and work space, only a light breeze is required.



Although comfort is usually associated with the work place, large areas and public arenas should also employ an air circulation strategy that makes occupants comfortable.

in large spaces. Cubicle partitions, large pieces of equipment or storage shelving can obstruct air flow and greatly reduce the spread of the horizontal floor jet. When this happens, obstructions can limit the destratification of a room. Very large or tall obstructions can even result in different temperature zones within a single work space.

Obstructions can be especially problematic for smaller diameter fans because the downward air column is restricted to such a small area. HVLS fans can overcome some floor level obstructions because the large diameter of the downward air column physically covers more floor space and the deeper horizontal floor jets can "wash" over and around smaller obstructions.

A final element to understand before beginning a product selection or design process related to air circulation is wind speed. Wind speed is different than CFM because volume and velocity are calculated separately and have different impacts on the work space. The volume of air moved (CFM) will determine how effective the destratification strategy is. Velocity will determine the physical sensation and direct impact of the air circulation strategy on the work space occupants.

High velocity wind speeds are not desirable in work spaces. Faster air speeds can over-cool occupants, create excessive noise, dust, and distraction, and may even decrease productivity. A three-foot diameter high speed fan can generate wind speeds in excess of 3,500 feet per minute, while only delivering around 25,000 CFM. By comparison, an HVLS fan with a 20-foot diameter will typically produce over 122,638 CFM but only generate wind speeds of about 864 feet per minute. The gentle breezes still provide the cooling effect of displacing the heat-layer around the body but without creating strong or distracting wind speeds.

SECTION 2: HVLS FANS COME OF AGE

When comparing and contrasting traditional high speed fans with HVLS fans, it is important to first determine what the overall goals for the project are. Will comfort be the main reason for creating a successful air circulation strategy? How important are energy efficiency considerations to the project? What about noise, general aesthetics and functionality? This section will help you understand why these are important choices to make, and offer some perspective on the selection process of fan types.

Comfort.
The most important deciding factor when designing an air circulation strategy is comfort. Making sure the fans compliment and support the heating and cooling system to make the occupants comfortable should be the primary focus when selecting fan types and styles. As discussed, rooms that are uncomfortable result in reduced productivity and increased energy consumption, and fans can greatly help moderate hot humid temperatures. Also it is important to note that in cooler climates during the winter months, fans help circulate warm air to the occupants work space as well. This is done by reversing the rotation of the blades so that air is pulled from the floor upward and mixed with warmed air trapped near the ceiling. By making sure the entire volume of air in the room is completely mixed, regardless of the season, the more comfort can be provided to the occupant.

Energy Efficiency.
When evaluating a ceiling fan, energy efficiency can be an important element

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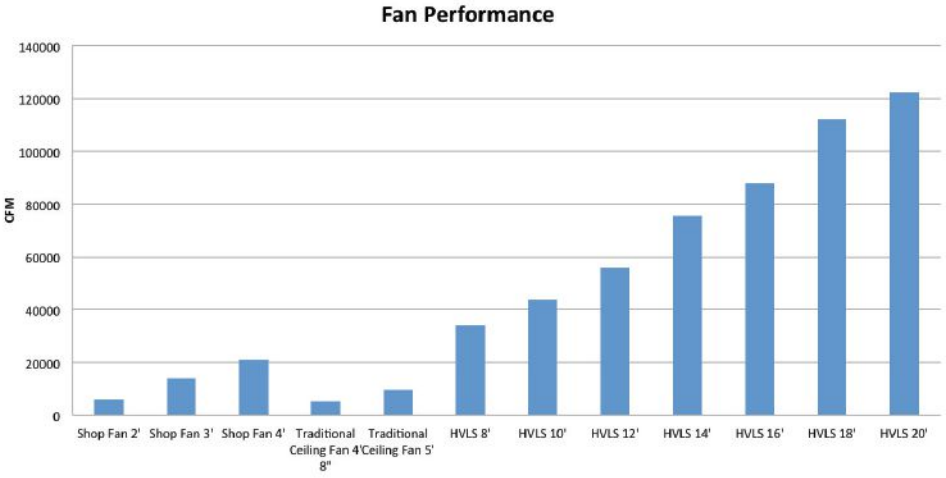

This chart shows the CFM of air circulated per watt of electricity used. As shown, a traditional 5' high speed ceiling fan will move less than 100 CFM per watt while HVLS fans are capable of generating over 450 CFM for the same amount of energy.

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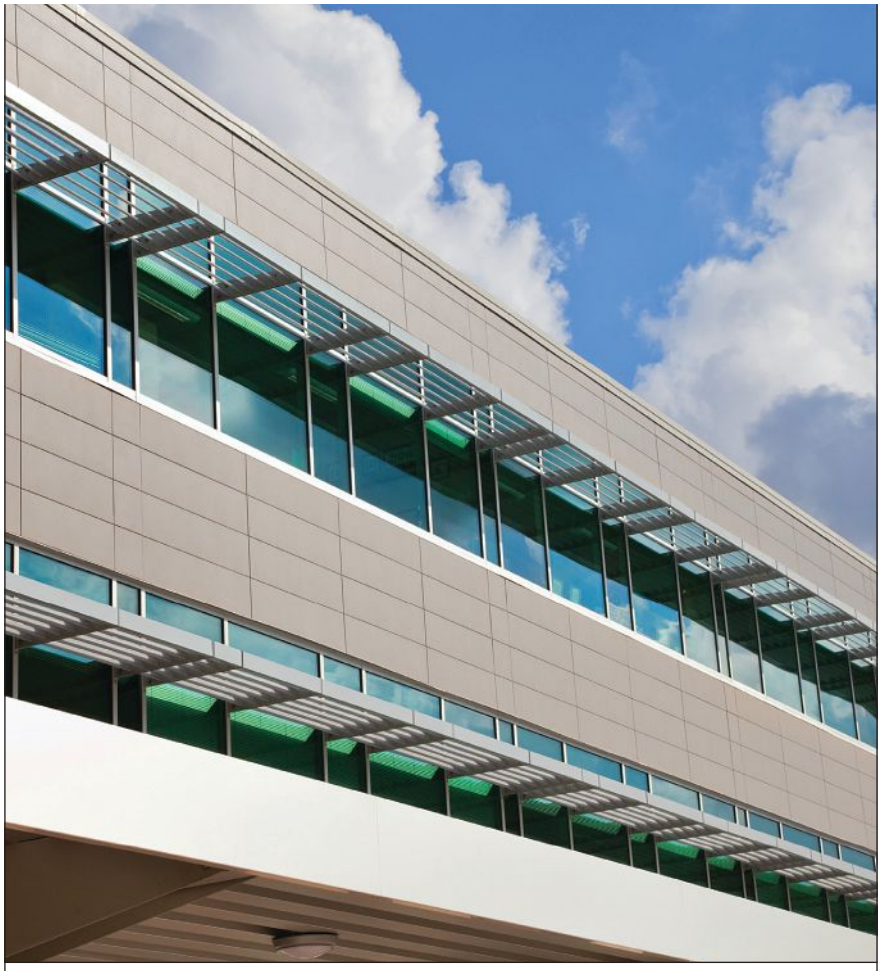
NICHIHA fiber cement

Presents:

Fiber Cement Panels as Rain Screens

By: Paige Lozier



Moisture intrusion in a wall system can be the cause of building defects, as well as health ailments for the building's occupants, making rainscreens a very important tool in water mitigation.

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LEARNING **OBJECTIVES**

By the end of this educational unit, you will be able to:

1. Describe the cause and effect of moisture intrusion in a wall system.
2. Examine the importance of rainscreens and weather barriers in water mitigation.
3. Identify examples of rainscreen technology and testing standards that measure their performance.
4. Discuss how some fiber cement panels act as a rainscreen and review guidelines for their installation as a rainscreen.

LEARNING OBJECTIVE 1: DESCRIBE THE CAUSE AND EFFECT OF MOISTURE INTRUSION IN A WALL SYSTEM.

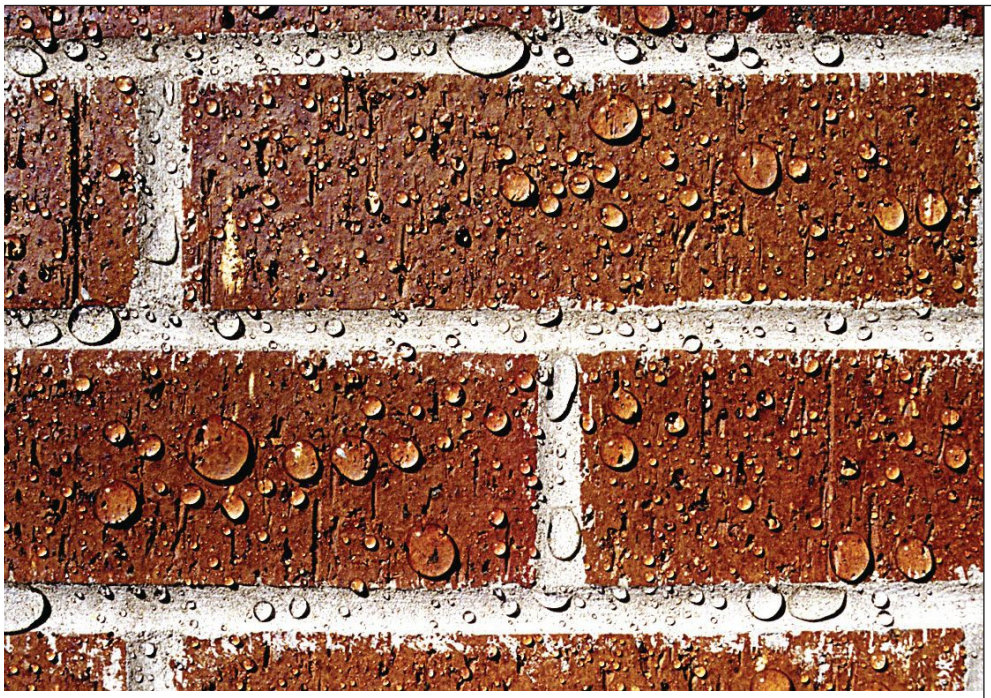
Sources of Moisture in a Wall System

Moisture intrusion in a wall system can be the cause of building defects, as well as health ailments for the building's occupants. Moisture sources differ depending on climate, construction practices and occupant lifestyles, but some common sources of moisture that present in all climates are construction moisture, elevated relative humidity, precipitation and ground water sources.

Construction moisture is moisture resulting from the construction process either due to excess water evaporating from the building materials, such as curing concrete and drying lumber, or from exposed conditions during the construction process such as uncovered material storage and rain-soaked wall assemblies prior to sheathing the roof.

Elevated relative humidity is the amount of water in air compared to the maximum amount of water it can hold at a given temperature. Cold air cannot hold as much water as warm air. When air comes into contact with a surface that reduces its temperatures so that the relative humidity reaches 100% (the maximum amount of water air can hold), dew point temperature has been reached and building surfaces at or below dew point temperature will condense water onto the surface of building materials. Keeping relative humidity low keeps the dew point temperature low and reduces the potential for condensation.

Bulk moisture intrusion occurs when a significant amount of water enters a building from precipitation or groundwater sources. The cause of this may be faulty or non-existent flashing, poor site grading, improper or non-existent rain screens behind exterior claddings, and non-existent or poorly maintained gutters and downspouts. Water concentrates around window and door openings, the roofline and construction joints, and the base of exterior walls. The building envelope (exterior walls and roofing) acts as the



Rainwater penetration is caused by the presence of water on the substrate, openings in the substrate that allow water penetration and/or pressure differences that drive water through the structural backup.

interface between the interior and exterior of buildings. To avoid moisture problems in extreme weather conditions, building envelope design must control water from all of these factors.

Effects of Moisture Intrusion

Moisture in envelope assemblies can cause numerous problems affecting the indoor air quality (IAQ) of a building and the longevity of building components. Internal moisture degradation is a leading cause of premature failure of building envelopes.

Persistent moisture can lead to rot, corrosion and other forms of deterioration. Moisture induced degradation could include reduced thermal resistance and decrease in the strength or stiffness of materials. Moisture also supports insect infestation, ranging from mites to cockroaches and ants. Moisture traveling through building components can cause corrosion of components and dissolve water soluble constituents, damaging the structure.

To summarize, some common moisture related problems include structural wood decay, high indoor humidity and relative condensation, expanding soil which can crack or undermine the foundation, metal corrosion, ice dams, insect infestation and mold growth.

If elevated moisture levels persist on or inside a wall or roof assembly, they can lead to the growth of microorganisms such as mold and bacteria. The metabolism of mold and bacteria can create microbiological volatile organic compounds (MVOCs) that adversely affect air quality inside a building. Mold can only grow in the presence of high levels of moisture and is very serious to building occupants. Mold spores can cause asthma, allergies, lung disease and a compromised immune system. Molds are a type of fungi that survive in areas where there is an organic food source and high moisture levels.

Many building materials are common fungi food sources as well, including wood, paper, carpet, and insulation. When mold spores are allowed to spread to damp areas indoors, they begin growing and digesting whatever they land on, gradually destroying it.

LEARNING OBJECTIVE 2: EXAMINE THE IMPORTANCE OF RAINSCREENS AND WEATHER BARRIERS IN WATER MITIGATION.

Causes of Rainwater Penetration Through Walls

The purpose of rainscreens, as their name implies, is to prevent rainwater penetration through walls. Rainwater penetration is caused by one or any combination of the following conditions:

- The presence of water on the substrate.
- Openings in the structural backup (substrate) of the wall that allow water penetration.
- Pressure differences that force water ingress through the structural backup.

Raindrop kinetic energy propels raindrops into unprotected openings in the substructure. In hot, humid climates if there are air pressure differentials, meaning air pressures are lower inside the structure than outside the structure, water can be driven from the exterior to the interior of the building through microscopic holes in the building materials.

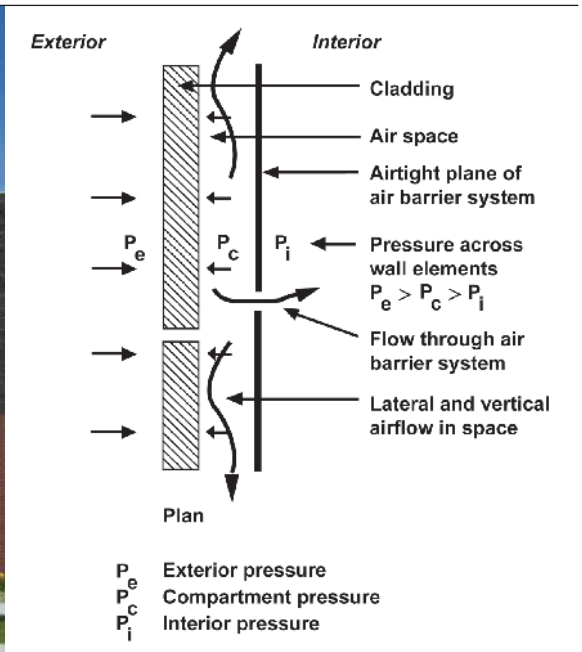
Surface tension causes water to cling to and travel along the underside of horizontal surfaces and travel along the underside of building components such as joints and window heads. This water can be drawn into the building by gravity or unequal air pressure.

Gravity moves rainwater down the face of the cladding and into sloped openings that the water encounters on its way down. The force of water entering by gravity is greatest on improperly sloped horizontal surfaces and vertical surfaces with penetrations. These areas must remove water from envelope surfaces through adequate sloping, correct drainage, and proper flashing.

Capillary action is a suction force that draws water into permeable materials and small openings. This is the natural upward wicking force that occurs primarily at the base of exterior walls. Building components that cannot withstand a large amount of water exposure, such as plywood or gypsum board, can create environments conducive to microbial growth and/or component failure.

Rain drop momentum, or wind-driven rain, during heavy rainstorms can force water inside the building if the envelope is not resistant to these forces. For

Rainscreens shed most of the rain and manage the rest, preventing moisture intrusion and the resulting premature decay in buildings.



There are three required components of a rainscreen wall assembly, which offer multiple moisture-shedding pathways

example, window sealants and gaskets that are not properly designed to flex with the window may create air gaps that can allow water into the building. Later in this course we will discuss design approaches for managing each of these water-driving forces through cladding.

The Importance of Rainscreen and Weather Barriers in Water Mitigation

Now that you understand the negative effects water can have on a building and its occupants, and the primary causes of rainwater penetration, we will examine the importance of rainscreen and weather barriers in water mitigation. The rainscreen approach is a successful method for deterring rainwater intrusion into walls. You have probably seen them before-even a rain fly over a tent is a simple example of a rainscreen. Rainscreens shed most of the rain and manage the rest, preventing moisture intrusion and the resulting premature decay in buildings. Rather than attacking the symptoms of moisture intrusion, rainscreens tackle the source-the forces that drive water into the building shell. By neutralizing these forces, rainscreens can withstand extreme environments. They appear to be effective in any climate and handle any weather condition short of a disaster.

The rainscreen principle can trace its beginnings back to the 1600's as a technique used in Norway in agricultural structures using the 'open-jointed barn technique' whereby shingle lap siding was used. It evolved and gained popularity in other European countries in the early 20th century, when it expanded to Great Britain and Canada.

Rainscreens can be defined as the exterior surface of a building (a cladding), which has direct contact with the weather and elements, but is not directly attached to the building substructure. It can be described as a barrier that sheds and attempts to control (but not prevent) the majority of the rainwater intrusion into the cavity between the rainscreen and the substructure.

A rainscreen stands off from the moisture-resistant surface behind it. Therefore, a rainscreen inherently has a cavity or pocket of air between it and the surface of the structural backup (or substrate). A rainscreen can loosely be called a veneer, though certain requirements must be met for the term "rainscreen" to be accurately used.

According to "The Rainscreen Principle" in the National Research Council Canada's Construction Technology Update Number 9, two exterior walls are better than one at controlling water penetration into a building. There are three required components of a rainscreen wall assembly, which offer multiple moisture-shedding pathways:

- The outer leaf or barrier is a vented or porous cladding (the rainscreen) that deters surface raindrop momentum.
- An air chamber or cavity – a few inches of depth is sufficient – separates the cladding from the support wall, reducing splashing and capillary moisture transfer. Large, protected openings (i.e. vents or weep holes) positioned at the top and bottom of the wall promote convective airflow, allowing moisture to quickly drain or evaporate from the air cavity.
- The inner leaf or barrier acts as the final moisture barrier and drainage layer that further protects against any moisture that bypasses both the cladding and air cavity. This is comprised of a weather resistive (air/

Common rainscreen claddings include: brick veneers, stud back-up, stucco, clapboard, panelized wall systems such as metal, alpolic, and fiber cement.

water/vapor) barrier, insulation, and the building structural wall.

The effectiveness of a rainscreen cannot be achieved without an airtight weather barrier and appropriately-sized air chamber/cavity. In one type of rainscreen system, water is intended to be allowed into the cavity areas between the outer wall and the substructure.

A weather barrier is a material such as building paper, liquid-applied, or rigid foam board that is installed over the sheathing and behind the exterior siding. There are other forms of weather barriers that are liquid applied and have self-sealing properties. It is a drainage plane that performs like a shell for the building so that liquid water that has penetrated the exterior finish does not pass through, yet water vapor can escape. By keeping building materials dry, a weather barrier improves building durability, decreases maintenance costs, and reduces the risk of moisture-related problems such as bugs, mold, mildew and rot. A weather barrier must be both water shedding and have a high moisture vapor transmission rate to be effective. It must also be very durable with tear resistance, UV resistance and moisture tolerance, as it is often left exposed before exterior siding is installed.

The installation of weather barriers and rainscreens requires comprehensive integration with other building envelope elements such as the structure, insulation, vapor retarder, air retarder and flashing systems. The weather barrier must be detailed and installed in accordance with the local code requirements.

To summarize, the four components of a successful building envelope design are:

- Deflection – limit structure exposure to rain with the use of overhangs and flashing.
- Drainage – any moisture that penetrates the wall must be able to be redirected to the exterior.
- Drying – any moisture that penetrates the wall should be able to dry within a reasonable amount of time before causing damage to the structure.
- Durability – use only materials that are tolerant.

LEARNING OBJECTIVE THREE
IDENTIFY EXAMPLES OF RAINSCREEN TECHNOLOGY AND TESTING STANDARDS THAT MEASURE THEIR PERFORMANCE.

Types of Rainscreens Defined

There has been significant confusion regarding rainscreens and for many years there was never a true standard of testing or measuring the performance of products to be used in rainscreen applications. Common rainscreen claddings include: brick veneers, stud back-up, stucco, clapboard, panelized wall systems such as metal, alpolic, and fiber cement.

Rainscreens can be achieved with a variety of construction materials in various applications, in residential and commercial construction. We will focus on a panelized wall system rainscreen for this presentation.

There are two types of rainscreens that will be described in detail:

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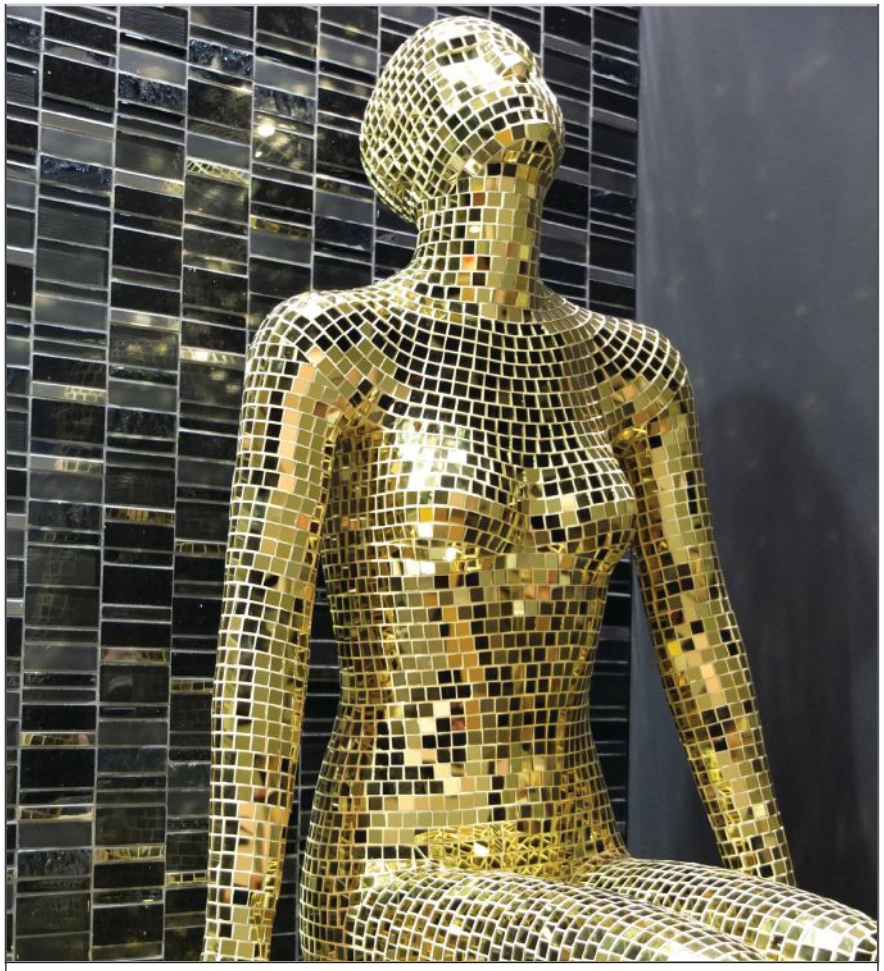
TILE OF SPAIN

Presents:

Modern Ceramics: An Ancient Industry's Surprising Embrace of Technology

By: Kathy Price-Robinson



Modern tile arches the span between the earliest history of humankind to today's and tomorrow's technologies that solve design, energy and comfort challenges with astonishing grace. Innovative solutions from Spanish manufacturers lead the way.

CONTINUING EDUCATION

Credit: 1 learning unit, AIA

Use the learning objectives to the right to focus your study as you read this article. To earn credit and obtain a certificate of completion, visit **http://www.hanleywooduniversity.com/files/upload/Architect_Mag/june%202013/tile_of_spain_arch.pdf.** and complete the quiz for free as you read this article. If you are new to Hanley Wood University, create a free learner account; returning users log in as usual.

LEARNING **OBJECTIVES**

By the end of this educational unit, you will be able to:

1. Identify and assess the four types of tile.
2. Discuss specification opportunities presented by new technologies.
3. Explain emerging technologies in tile for walls.
4. Discuss new technologies in tile for floors and counters.
5. List uses for architectural ceramic as a building material.

You can sum up today's architectural ceramics with three terms – **innovative, versatile, and high performance.**

Few other building materials so gracefully span the era from antiquity to the future with such groundbreaking potential — from glazes that turn ceramics into touch screens for switchless walls, to façade tiles that neutralize harmful nitrogen oxides, to inkjet printing of a precision unimaginable just a couple of years ago, and to increasingly strong and thin ceramics tiles ideal for retrofits over existing tile as well as fine furniture veneers.

Here's how one architect sums up modern ceramics: "It's just mind boggling," says Steve Trott, AIA, of Hnedak Bobo Group in Memphis.

"Unlike other materials and crafts steeped in history, modern ceramics are an industry on the cutting edge of innovation," notes ceramic consultant Ryan Fasan.

"Rather than resisting change, these manufacturers fully embrace emerging technologies," he adds. "They are, in fact, redefining the industry."

And while the industry redefines itself, it also impacts specification options in the design world.

"Porcelain products in the interior built environment are key to providing solutions that can be of high aesthetic, high value, high performance and meets sustainable solutions," says Aneetha McLellan, director of interior architecture at HDR Architecture in Omaha.

Ceramics is one of civilization's oldest and most venerable forms of art. Ceramics have been used to protect and beautify our environment since the cradle of western civilization in Mesopotamia and quite possibly before. Much of the world's early history would be lost forever but for the remains of fired clay objects. Ceramic tile production dates back to before the 9th Century.

For all its technological innovations, modern ceramics still begin with three basic ingredients: clay (right), sand (bottom left) and feldspar (top left). These ingredients are found in nearly limitless supply on our planet. They are classified as "perpetual resources" and react in a white-hot kiln to create an inert piece of ceramic tile.

Modern inkjet decoration allows Spanish tile manufacturers to take inspiration from diverse sources like this vintage wood from a tiny French fishing village.

In this modern era of breakthrough technological advances in all areas of life, new opportunities arise in the field of ceramics for design professionals to embrace and expand the choices of their specifications. With a strong foundation of knowledge in the basics of ceramics today, specifiers can push the proverbial envelope of functional and durable design into new frontiers with progressive emerging ceramic innovations.

CERAMICS 101 – FOUR CATEGORIES OF TILE

The vast world of ceramic tile becomes quite simple when broken down to its most fundamental aspects. Tile is a completely natural building material comprised of three ingredients – clay, sand and feldspar. Just as a master pastry chef finesses the chemical reactions between flour, yeast and eggs, a ceramicist controls the reactions of tile's three components.

Those three basic ingredients, found in nearly limitless abundance (classified as "perpetual resources") combine in the white-hot heat of a kiln to create an inert piece of ceramic tile.

Manufacturers have millennia of experience behind them to understand that we require tiles to perform in four distinct environments. And that is exactly how many different types of tile bodies they must produce to ensure their tile provides the lifelong performance it should in any environment. This is the foundation upon which a successful ceramic specification is built.

The measure for classifying the types of ceramic is straightforward– it's based on the density of the body, and therefore its porosity or ability for water absorption.

In the first category, the most porous modern tile produced is above 7% and is normally found at around 10% to 12% water-absorption. This category is the best specification for interior wall applications. The high porosity makes sense primarily for two reasons:

1. Available porosity makes the tile adhere easily and quickly to vertical surfaces with the most common and inexpensive mortars or adhesives.

2. The lower-density body can be fired at lower temperatures, allowing for the use of the broadest range of minerals and frits (fused particles) in the glaze for the widest range of decorative options.

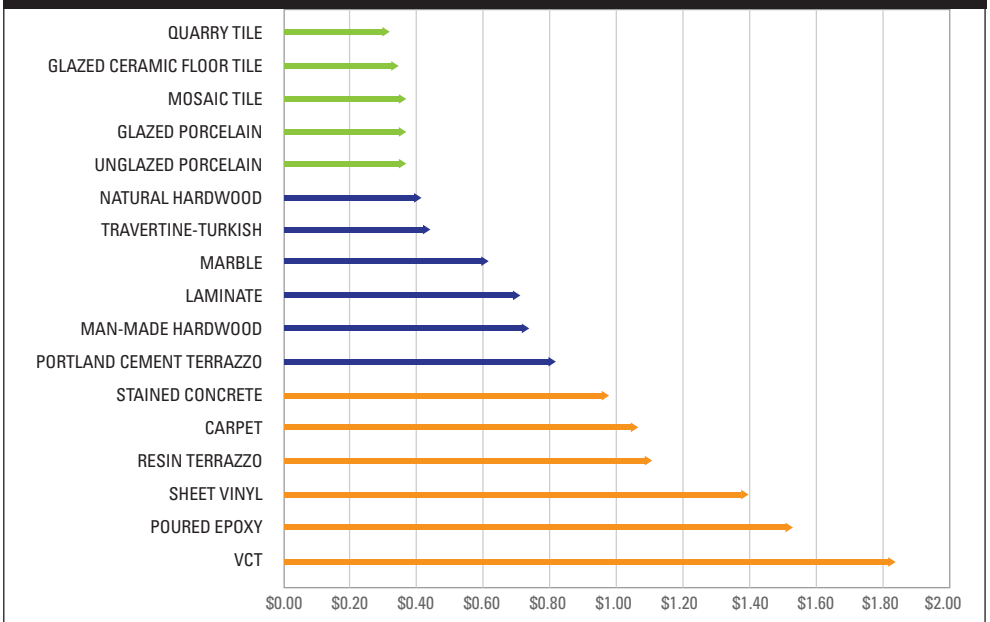
For the second category, driving the water-absorption capabilities of the body below 7% to around the 3% range gives tile the ability to withstand foot traffic in a dry environment. This is the most sweeping category of specifications and as such, a range is offered to give the broadest variety of options for specifiers to choose from, based on client needs. The lower the traffic of the environment, the higher porosity material will be acceptable.

In the third category, increasing the density so that water absorption is below 3% to 0.5% opens the possibilities for the tile to survive on floors in occasionally wet environments and in exterior applications where freeze-thaw or thermal shock may be an issue. Sometimes calling this category Gres or Stoneware, quality manufacturers test this category of material for suitability and provide data if they recommend it for exterior installations.

Properly specifying the appropriate type of tile for the area will minimize economic, environmental and installation burdens while maximizing design options.

And in the final category, the densest tile body produced provides water absorption of less than 0.5% for the

Floor Coverings Comparison: Life Cycle Cost Per Square Foot Per Year



Life Cycle Cost Study by Scharf-Godfrey, division of Phoenix Engineering for TCNA

Initial cost is a poor indicator of value. The high durability and low maintenance of ceramic tile makes them the lowest cost choice.

most demanding environments like submerged, high humidity or areas of wheeled traffic. This material, often described as porcelain, can be, and often is, specified in the previously mentioned areas but always at a cost either in aesthetic options or in the cost of material or installation.

Technical characteristics increase as porosity declines, with each subsequent category, but at a cost. The denser a tile's body becomes, the more resources are used in production, shipping and installation. Properly specifying the appropriate type of tile for the area will minimize economic, environmental and installation burdens while maximizing design options.

Understanding and utilizing the four types of tile appropriately allows a specifier the broadest range of options to satisfy client design goals while ensuring a lifetime performance solution. Explaining selections to clients in easily understood terms, namely the area of use and demands of environment, creates tacit acceptance of the fact that you are providing them a solution that will offer maximum performance for maximum value.

LIFECYCLE COSTS

For a client or specifier today considering ceramics as a preferable material for the 21st century, data suggests a good return on investment. In today's economy, and for the foreseeable future, ROI remains a major concern. A study commissioned by The Tile Council of North America indicates that ceramic tile is the lowest-cost option for cladding when amortized over the average lifespan of a building (40 years).

Thin yet durable tiles bring benefits on may levels. They require fewer materials to manufacture, are lighter to transport, easier to fabricate on the job, and have many innovative uses, from furniture veneers to tile-over-tile retrofits.

The study factors in replacement and maintenance costs of a comprehensive range of materials – from quarried tile to vinyl composition tile (VCT) – and demonstrates the reduced value of low upfront-cost materials over the lifespan of a building. While upfront costs nearly always remain a deciding factor, this study argues that tile reduces the cost of an even more valuable commodity for most people today – time. Lower maintenance costs, less replacement hassle and inconvenience, mean less time spent on maintenance of a building and more time spent living or working in it.

Other benefits for specifiers to consider include: tile is non-conductive but provides a high thermal mass; it is inert and unaffected by fire or floods; it is one of the few mediums that can be rendered in color and unaffected by UV exposure, and it is inorganic and so naturally inhibits the growth of bacteria and other health risks.

NEW TECHNOLOGIES BUILT ON THE FOUNDATION

When modern ceramics are factored into the conceptual stage of design, they often provide more than simple surface solutions as they become an integral part of building performance as well as the design program.

Today, according to tile expert Fasan, "Creativity and innovation are the backbone of the modern ceramics industry." The goal for many manufacturers is providing performance-based solutions for modern design and lifestyle challenges. Highlights of these solutions include thin formats, inkjet decoration, advanced chemistry in glazes, and innovative installation technologies. Let's look deeper into each of these.

THIN FORMATS

Emerging en masse around 2008, minimal thickness porcelain and ceramics continue to provide creative solutions to North American designers and open up new areas of specifications beyond the traditional backsplash and tub surrounds.

Traditional thickness of porcelains is 10mm and newer production processes have created 4mm to 6mm varieties. Large format ceramic wall tile has also been reduced in thickness by many manufacturers from 13mm down to 7mm or 8mm. Depending on the production process involved, many of the thin porcelain products are offered in sizes up to 36" x 120".

Earlier this year, the revolution of ceramic technologies astonished architects attending Cevisama, the international tradeshow hosted annually in Valencia, Spain.

"I was totally amazed at the advancements our group witnessed being made in the ceramic and porcelain tile industry of Spain," says architect Trott. "Of particular interest to me was seeing first hand thin-ceramic technology and understanding new possibilities for its application in the practice of architecture."

Noting the use of thin ceramics for countertops, sink, and even stovetops, Trott believes this emerging technology

The blending of diverse ceramic styles creates an urbane yet grounded environment. This room includes flooring radiating the personality of wood but with the practicality of ceramic, a vanity shining with innovative thin ceramic veneers, and a backsplash exuding a riot of inkjet complexity.

"is just beginning to scratch the scratch the surface of design possibilities for the modern world."

This reduction in thickness and weight comes with substantial environmental benefits. One of the prime criticisms of ceramics by competitive industries is the high embodied energy associated with production and shipping. Reducing the thickness by half effectively reduces the embodied energy and raw material requirements by the same factor.

This weight reduction offers the benefits of porcelain to areas of specification once impossible with the traditional, heavier material. In fact, ceramic manufacturers now approach furniture and cabinetry designers to offer slim porcelain as a veneer material, competing with traditional laminate veneers. This gives

This article continues on http://www.hanleywooduniversity.com/files/upload/Architect_Mag/june%202013/tile_of_spain_arch.pdf. Go online to read the rest of the article and complete the corresponding quiz for credit.

Tile over existing installations saves time, resources and waste.

SUSTAINABLE IDEA: INSTALL THIN PORCELAINS AND CERAMICS OVER EXISTING TILE INSTALLATIONS:

Another solution provided by thin porcelains and ceramics is the ability to install them directly over existing tile installations. This method of renovation offers an environmentally preferable option for specifiers today. Along with reduced embodied energy in the thinner material, tiling over an existing installation saves the substrate and tile from the landfill or recycling stream. Plus, this program requires no new or virgin substrate material for the new installation. Possibly more importantly for the client, a renovation of this type takes less time, creates less disruption for the occupants, and prevents fewer indoor air quality issues that tile demolition activity brings to a space.

As an example, hotels have been able to renovate a guest room in a single day, minimizing loss of revenue. Retail spaces can complete a flooring change without closing their doors for an extended period of time.

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Letter From China **Is the Real Estate Bubble About to Burst? 122** Next Progressives **Studio H:T Doesn't Sell Out 136**
Politics **Redesigning Penn Station 142** Critique **Rybczynski on Parametrics 150** Design **Hanley Wood's New Digs 160**

Zaha Hadid's Guangzhou Opera House in China, which Witold Rybczynski calls a "poster child for the caulking industry" in his critique of parametric design on page 150.

VIRGILE SIMON BERTRAND

LETTER FROM CHINA

BUILDING ON EMPTY

CHINA'S GHOST CITIES HAVE LONG RAISED FEARS ABOUT WHETHER THE COUNTRY'S INFLATED REAL ESTATE MARKET IS A MASSIVE BUBBLE WITH GLOBAL ECONOMIC CONSEQUENCES. IS IT FINALLY READY TO BURST?

Apartment buildings under construction in the Kangbashi district of Ordos, one of China's notorious ghost cities.

Text by **April Rabkin**

THERE ARE MORE people in Kangbashi now than when I first wandered its vacant streets four years ago. Back then, news stories had started to herald it as a modern-day ghost city, a failed attempt to create a Chinese version of Dubai. The negative media attention spurred then-Premier Wen Jiabao to order the local government to relocate offices there, a transferred worker told me when I made a return trip to Kangbashi in April. A district in the city of Ordos located about 470 miles west of Beijing, Kangbashi is fed by coal and rare earth mineral mines from the surrounding Inner Mongolian desert. But as I discovered, the place remains skin-crawlingly creepy—simultaneously the fastest-growing city and the emptiest one that I've ever seen, where the people seem outnumbered by surveillance cameras. "It's one of the safest cities in China," says Gao Feifei, a young accountant living in an apartment allocated by her government job.

There are more empty buildings than ever. Rising out of the desert is a forest of 180 half-finished apartment towers, each 20 stories tall. The development is named Civil Servant, appealing to the dream of becoming a scholar-bureaucrat in the Confucian tradition. Its apartment prices are down by more than a third, with a parking space thrown into the deal. But there's not much incentive to live there. "There's no place to buy even a bottle of water," said Chen Jun, a nearby hotel manager.

For those with more political ambition, a few miles away sits a gated community of two- to four-story villas. Less than one in 10 is inhabited. They are in walking distance of five

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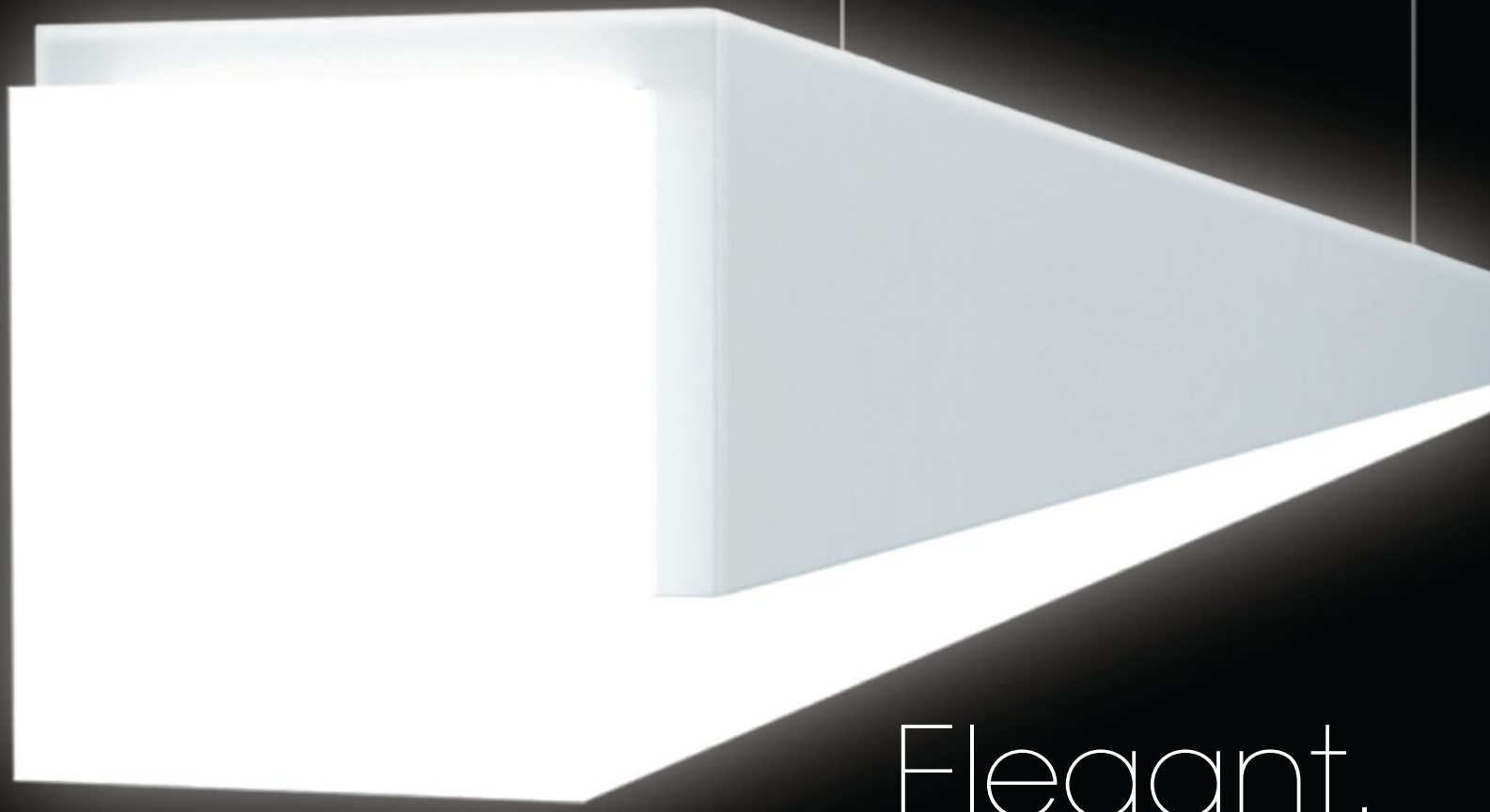
GETTY IMAGES



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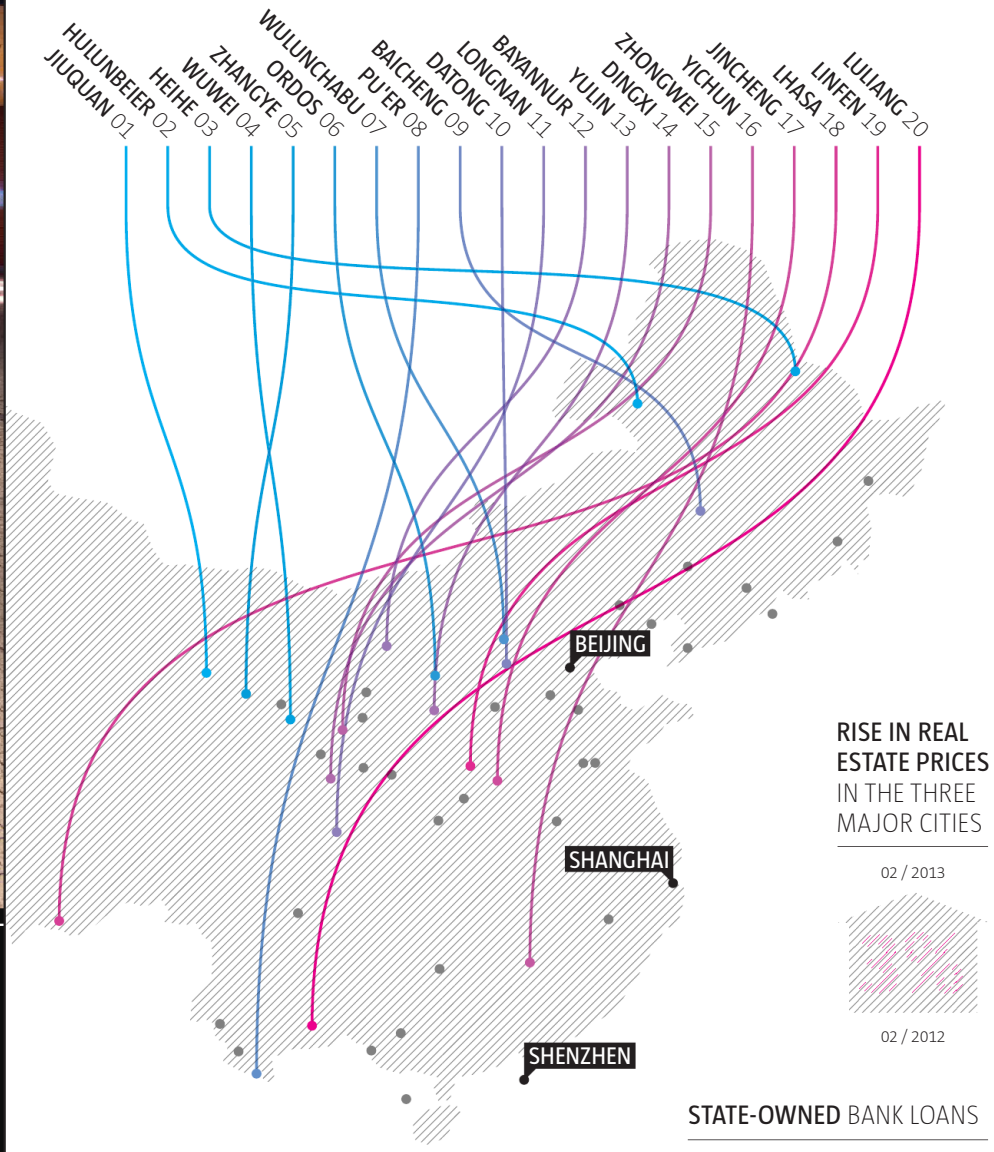
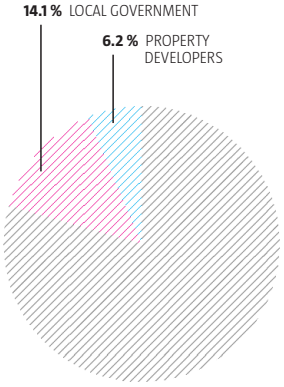
20 HIGHEST RISK CITIES IN THE REAL ESTATE MARKET



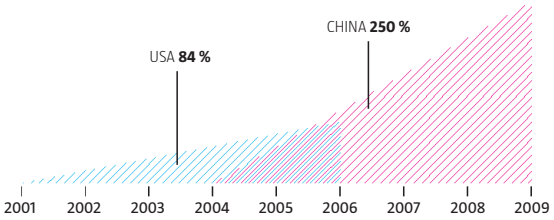
ACCORDING TO 2012 REPORT BY THE CHINA REAL ESTATE INFORMATION CORPORATION

RISE IN REAL ESTATE PRICES IN THE THREE MAJOR CITIES

STATE-OWNED BANK LOANS



INCREASE OF HOUSING PRICES



With such a large percentage of loans given to governments and developers, a crash could lead to a crisis within the Chinese Communist Party.

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massive city government office buildings, which occupy the only populated part of town. Chen says that even the real estate agencies have disappeared, because no one is buying. When I looked for one, people pointed me to two billboards with pasted-on advertisements.

Kangbashi brought tremendous job opportunities for architects around the world, who flocked here to design homes and civic buildings. Howard Jiho Kim, age 24 at the time, came from the United States in 2007 to work with MAD Architects in Beijing. MAD was commissioned to design the Ordos Museum, which houses a mix of artistic artifacts and anthropological dioramas. The museum was one of the first buildings to go up, sited on a huge square in the center of the city.

The deadlines were astonishing. The museum's exterior skin was already under construction when Kim was given three days to design the interior. Still, the project was a great opportunity for Kim—the largest thing he had worked on up until then—but he seems a little wistful now. He hasn't been back to see it completed. "Huge spaces without much inside—it's a very sad thing for an architect," he says. "Even if the building is amazing, if no one uses it, what's the point?"

The museum, a metallic, globular mass, was inspired by Buckminster Fuller's work, Kim says. "It's quite alien, which was unavoidable. In architecture, what's important is the context. But when we first visited, it was all just barren land. How do you build a city from nothing? That's what's happening all over China. It's a city from zero."

ORDOS'S KANGBASHI DISTRICT—a white elephant in a windswept desert—is an extreme case. But China's real estate boom has been fueled by unusual policy at the local and macro levels. The conventional wisdom is that China's Communist Party adopted capitalism wholesale. In fact, most of the economy is still state-run. And real estate, an officially designated pillar of the economy, in particular, feels the heavy hand of government policy. The question is: Have those policies helped create a massive bubble?

"I see Ordos as simply a more flamboyant example of dynamics that pervade China's real estate market across tiers and regions," says Patrick Chovanec, chief strategist at Silvercrest Asset Management, a New York–based investment adviser. "The issue has never been a lack of people with desire for better housing, but whether they could afford the homes that were being built, purchased at high prices, and held as investments in anticipation of such demand. There is, no doubt, some market clearing price at which all the houses in Ordos would be filled. The question is then,

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- High Absorption: Ideal for interior walls or vertical areas that are dry or occasionally wet. Low firing temperatures deliver a variety of texture and color choices. >7% water absorption.
- Moderate Absorption: Usually interior floor tiles used in dry areas only. The lower the moisture percentage, the more foot traffic they can withstand. 3% to 7% water absorption.
- Low Absorption: Can be used in interior or exterior spaces, and subjected to occasional moisture or water penetration. Suitable for bathrooms. 0.5% to 3% water absorption.
- Extremely Low Absorption: Known as porcelain, this is generally floor tile for interior or exterior spaces, for use under water as well as heavy pedestrian or vehicular traffic. <0.5% water absorption.

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what is that price, and what kind of losses does it imply for developers, investors, banks, and local government?"

The bears foresee a ripple effect that would destabilize the entire system. China's economy may be "caught up in very powerful feedback loops," according to Michael Pettis, professor of finance at Peking University. "In the early stages of a growth miracle, we are always surprised," he wrote on his blog. "Growth far exceeds even our wildest expectations. Once the economy begins to slow, however, we have also been—in every case that I can identify—shocked by how vicious the slowdown turned out to be."

What's obvious now is the disconnect between supply and demand. On the demand side, China is experiencing the biggest urbanization in world history. Some 400 million people are projected to become city dwellers over the next decade. Most of them would be happy to own a modest home with a private toilet. On the supply side, countless luxury apartments sit vacant as investment properties. (Most of the new residential construction in major cities has been targeted to the luxury market.)

Not all economists envision worst-case scenarios for the real estate market. "There are bubbles in some Chinese cities, but to say that the whole of China's property market is a huge bubble is another big overstatement, in our view," wrote Ting Lu, Xiaojia Zhi, and Larry Hu, Chinese economists at Bank of America Merrill Lynch, in a March report titled "Demystifying China's Ghost Towns." They continued: "Home prices are not cheap, but neither are they exorbitant in most parts of China."

For instance, Beijing's house price-to-income ratio, which compares the cost of the typical house to the average annual household income—is among the highest in the world. According to the International Monetary Fund, Beijing's ratio is more than 22.3, compared to 6.2 in New York City. In Beijing, Shenzhen, and Shanghai, real estate prices are still rising, up more than 3 percent in February compared to one year earlier. But nationwide in China, the house price-to-income ratio was a little more than 7 in 2010, which seems reasonable to many economists.

Nevertheless, if the bubble metaphor proves accurate, what a ferocious bust it would be. U.S. housing prices rose 84 percent between 2001 and 2006, before the real estate market crashed. China's housing prices rocketed 250 percent between 2004 and 2009.

The company with the most skin in the game also seems the most pessimistic: "Winter in the real estate industry will be here for the long-term," wrote Yu Liang, the president of Vanke, China's largest residential real estate developer, in a column for *Caixin* magazine. "It is difficult to see an end." Vanke just bought a 70 percent stake in Tishman Speyer, the biggest commercial property developer in the United States. The next frontier in Chinese real estate, at least for Vanke, is outside China.

CHINA'S MARKET ISN'T GOVERNED by the same policies as the American market. For example, homeowners aren't charged annual property taxes. Instead, local officials' salaries come almost entirely from land transfers, which make up about 70 percent of the revenue of cities, towns, and even counties across the country. That's quite an incentive to sell land and keep developers in business.

On the demand side, social factors may

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The Ordos Museum, designed by MAD Architects and completed in 2011. The building was intended to be the centerpiece of what has become a ghost city in the desert.

IWAN BAAN

take the blame. According to traditional gender roles, women expect their future husband to own a home—and avoid marrying anyone who doesn't. There's a saying that despite the laws requiring monogamy, the reality is not one wife per husband, but one wife per house. It's even blamed on mothers-in-law: the so-called "mother-in-law demand," in which the hypothetical fiancee's mother insists on seeing the deed of her daughter's suitor's house. Sociologists have disproven this cause and effect. It's rare to find a woman who decides her life partner based on him owning a house. But fear tactics, in propaganda and advertising, support housing demand anyway. For example, parents may buy their son a home out of fear that he'll otherwise remain a bachelor.

The strongest driver of demand remains economic policy. The government, to boost economic growth, pushes interest rates so low that they are negative. Left in an account at state-owned banks—the only legal banks in China—savings don't even keep up with inflation. There are few other low-risk investments for the average person. The stock market, for one, is too new, unpredictable, and corrupt—and besides, it's mostly restricted to state-owned companies. Real estate, by comparison, seems like a safe bet.

Meanwhile, Shanghai and Beijing officials often announce efforts to tamp down prices. At least one of the government's own think-tanks, however, call such efforts half-hearted. The China Center for International Economic Exchanges said in a report in April that the central government's latest measures to control the real estate market, by raising mortgage downpayments and barring people from buying second homes, would "possibly, in part, come to nothing."

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BUILDING SPREE

390 MUSEUMS WERE BUILT IN CHINA IN 2011 ALONE

According to *The New York Times*

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Indeed, for all its talk, the government hasn't taken its foot off the gas pedal, and has kept interest rates low. Likewise, local governments still depend on selling land just to pay their own salaries and keep schools running. The central government clearly knows that if and when the real estate market does collapse, local governments may go down with it. Since a huge chunk of state-owned bank loans are to local governments and property developers—more than 20 percent of bank loans combined—if real estate prices plummet, the Chinese Communist Party itself could face a significant crisis. Rather than changing policy, some party officials are investing their own money outside of China, in a widely known and sometimes illegal exodus of capital.

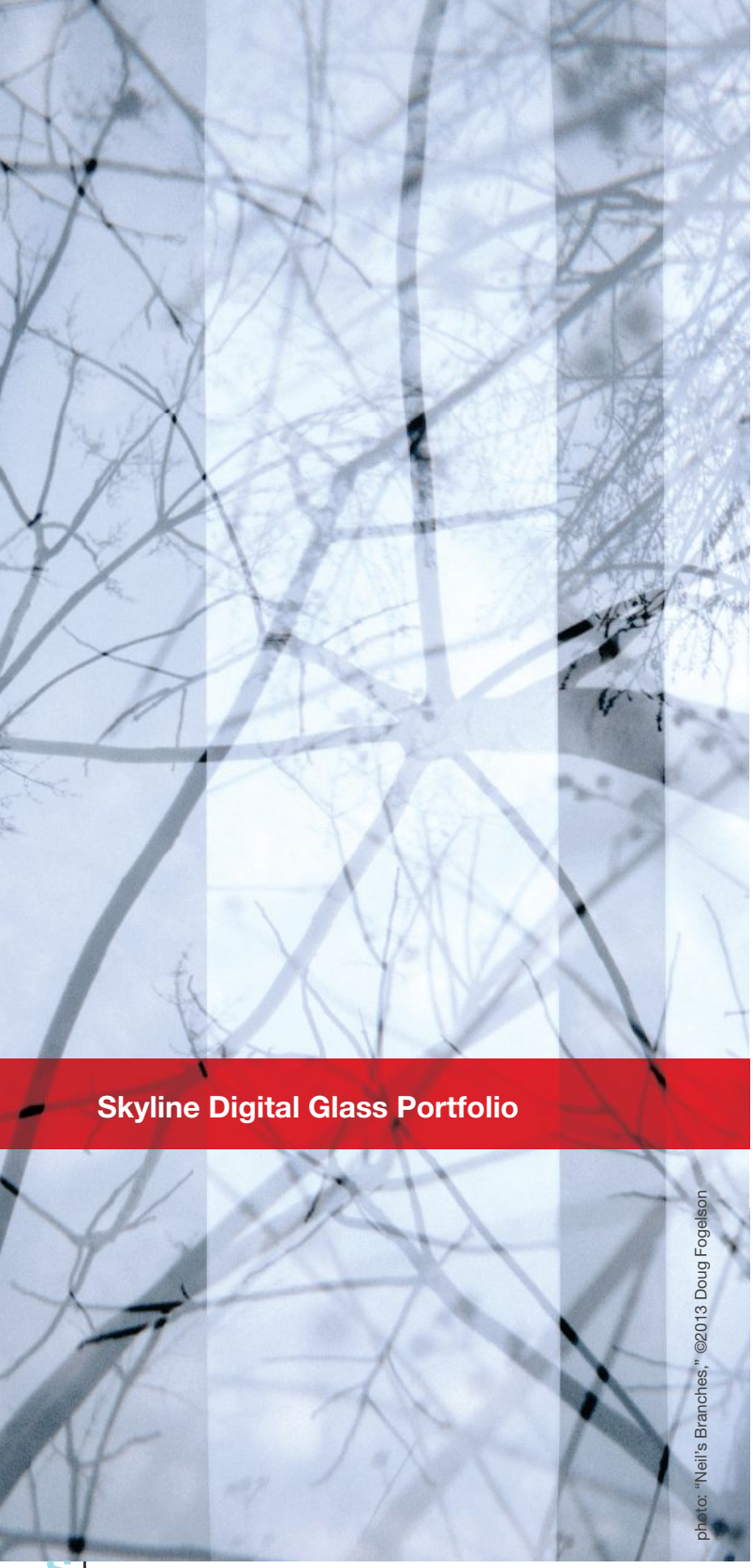
FIRMS AND INDEPENDENT ARCHITECTS from around the world flocked to China in the lead-up to the Beijing Olympics in 2008 and the Shanghai World Expo in 2010. Even more arrived as the financial crisis halted development in the rest of the world. Today, architects say there's about half as much work available in Beijing as during the height of the boom. But in smaller, less prestigious, so-called "third-tier cities"—of which there are practically too many to count—the government is still investing in architecture. Tianjin, Chengdu, and Xi'an are prominent examples.

"They have designs to become second-tier cities," says Kim, and they plan to do so by building CBDs, or designated Central Business Districts. That means designing an entire business center from scratch—usually finding an area near the city center, building tall, landmark towers there, and trying to attract major banks and corporations.

"In post-Olympics Beijing and post-Expo Shanghai, there are fewer opportunities for foreigners," says Jeffrey Johnson, director of China Megacities Lab, an experimental research unit at Columbia University's Graduate School of Architecture, Planning, and Preservation. "There's a tendency to hire more local firms rather than international. China is keeping many architecture offices operating around the world, but it's more difficult to get a foothold now. Boom markets are moving westward, and those projects are going more to Chinese firms." He rattles off Chinese firms to watch: Neri & Hu, MAD, Studio Pei-Zhu, Urbanus, Zhang Ke's Standard Architecture—and of course, Amateur Architecture Studio, headed by Wang Shu and Lu Wenyu.

Even in the middle of a project, some clients change their minds about working with foreign architects, in light of Chinese architects' lower fees. HHF Architects, based in Basel, Switzerland, was half done with a house in Yunnan when

CATALOGTREE



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that happened. "The client couldn't understand why we were more expensive than Chinese architects, and we couldn't make him understand that quality takes time," says HHF partner Simon Frommenwiler. "The house is empty. Trees are growing over it. It looks like the temples in Cambodia."

Many firms are branching out. Roberto Bannura is the Beijing director at Steven Holl Architects, best known in China for residential properties such as Linked Hybrid in Beijing, eight housing high-rises connected by colorful bridges. "Housing has slowed down," Bannura says, "but I don't see much of a downturn in commercial and office buildings." Still, the market is tighter. "Since late 2010, we perceive less opportunities. There's a lot more people working here, more architects coming from abroad, setting up their business here. So it's a double whammy—additional competition and less opportunity."

The firm hasn't had to lay off any architects in Beijing. Holl's firm is one of many getting business from a current boom in museum design. In the coastal city of Tianjin, the firm is building an ecology museum as well as a planning museum, both to total about 650,000 square feet. They are like 3D puzzle pieces side by side; one is the inverse of the other. They will be seated in the newly designated eco-district, alongside a new library and opera house. "That's five or six brand-new buildings," Bannura says.

In 2011 alone, 390 new museums appeared in China, according to *The New York Times*. The boom has been fueled by national policy and government investment, not a surge in nonprofit support for art and history. In fact, nonprofits are mostly illegal in China. The central government has a goal of about 100 new museums per year, Bannura says. It's all out of nationalistic ambition to compete with the museum-rich nations of the developed world. Real estate developers have financial policy incentives to insert museums into their projects.

There are other growth areas, too. Michael Tunkey, a principal at Cannon Design, a leading designer of healthcare projects, says his business is still thriving. He is designing a large public hospital on the tropical island city of Haikou, and a small private hospital in Shanghai. "The government cleared the way for private foreign investment in the private healthcare market, while simultaneously pouring government funds into the public healthcare system. This has opened the floodgates for development."

IN ANY AREA, one thing is clear to architects working in China: their opportunities are vulnerable to political relationships. Developers need *guanxi*, connections, to get the land in the first place—that's their highest hurdle in any project. After that, if political relationships sour, construction halts.

"Things happen in China. Mayors are arrested. Clients disappear," says New York City–based architect Dan Wood, AIA, a partner of WorkAC. "If you're lucky, you get paid for 75 or 80 percent of your work." In 2008, Wood was one of the foreign architects hired, along with Ai Weiwei, by tycoon Cai Jiang for a project called Ordos 100. As suggested by its name, the idea was to build 100 houses in the desert. The plans shriveled after the mayor was replaced. "It died a slow death," says Tunkey, who also worked on the project. "By the time of Ai Weiwei's arrest it was definitely over."

Now just a few shells of houses are left in the desert, not far from the ghost city of Kangbashi—omens, perhaps, of the impending bust.

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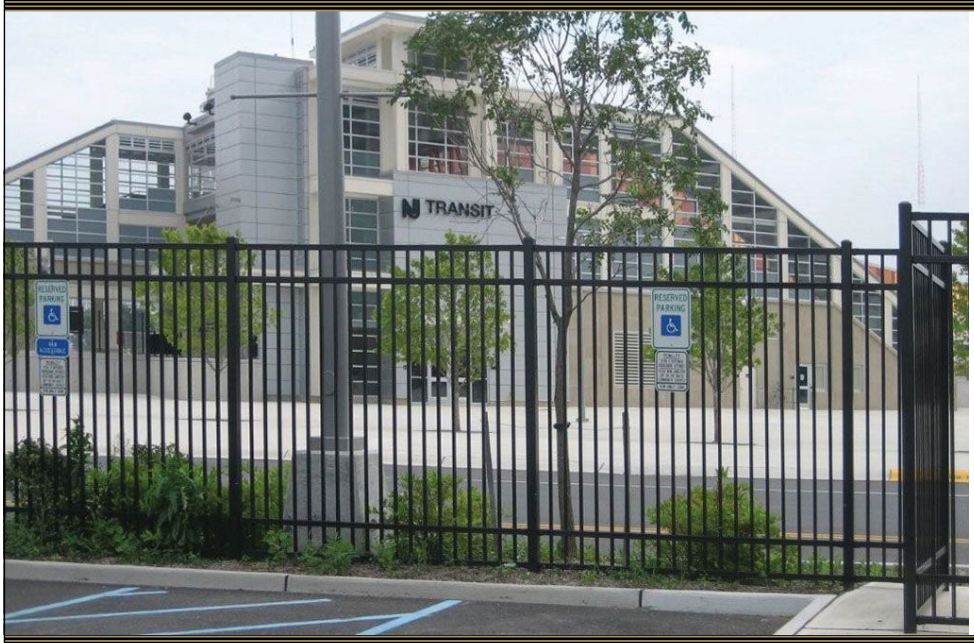

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NEXT PROGRESSIVES

UNCONTAINED

STUDIO H:T REFUSES TO BE TYPECAST. THIS RISING FIRM HAS REJECTED FORMULAIC PROJECTS IN FAVOR OF ONES THAT RESPOND TO INDIVIDUAL SITE AND CLIENT NEEDS.

Christopher Herr (left) and Brad Tomecek, in the Boulder, Colo., office of their firm Studio H:T Architecture.

Text by **David Hill**
Photo by **Matt Nager**

WHEN ANDREW MCMULLIN, a contractor in Boulder, Colo., wanted to build an off-the-grid house made of shipping containers, on a rock outcropping 9,000 feet above sea level, he turned to a local firm named Studio H:T Architecture. Founded in 2005 by Christopher Herr, AIA, and Brad Tomecek, AIA, the studio had developed a reputation for its cutting-edge design using sustainable, innovative materials. But Herr and Tomecek had never worked with shipping containers.

For McMullin's house, just outside the funky mountain town of Nederland, the architects placed two shipping containers side by side, about 12 feet apart at one end and 20 feet at the other, creating a wedge-shaped space in between for a living and dining area. They insulated the containers from the outside and clad them in fireproof, horizontal plank siding. In one container they designed a kitchen, an office, and a laundry room; in the other, two bedrooms. Photovoltaic panels on the roof provide electricity for the 1,500-square-foot dwelling, and winter heating comes from a pellet stove. The house is aligned to take advantage of Colorado's abundant sunshine, which is absorbed by the living room's concrete floor during the day (via two garage-door style windows) and helps heat the house at night.

You can't see Shipping Container House from the main highway that runs through Nederland, but the structure has been widely published—in newspapers, magazines, and on websites. And for good reason: It is, in a word, stunning. One end of the house perches delicately on the rocks, while the other, wider end seems to stretch toward the surrounding mountains. "We call it the 'origin' and the 'echo,'" Tomecek says. "The house is really a dialog between those connecting elements."

Shipping Container House was completed in 2010. And given the buzz it generated, Herr

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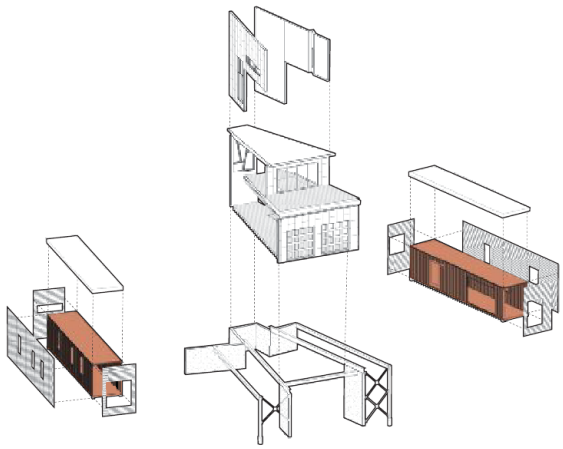
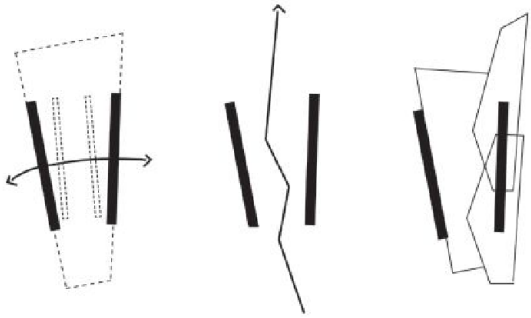
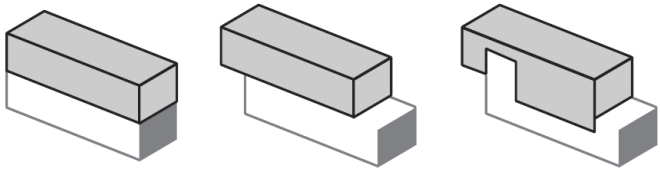


Fractured Residence



Splayed walls create tension | Fissure materializes | Shifting + settling occurs

32nd Street Modular House



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STUDIO H:T

and Tomecek could probably have turned Studio H:T into an all-shipping-container, all-the-time practice. "But we didn't want to be pigeonholed," Tomecek says. Indeed, he and Herr have been known to push back against prospective clients who want their own version of Shipping Container House. "We grill them. We ask, 'Why containers? Do you really love them?' We explain that they can be really loud, and you're probably not going to save money by building with them. If they're willing to go for it, and really want to try something different, we'll work with them. But we don't go around saying, 'Container, container, container!'"

"Some architects practice in a particular style," Herr says, "and there's nothing wrong with that. But that's not what we do. We ask and answer a series of questions about the site, the client, and the program. And that's what leads to the architecture."

WORKING OUT OF a small office in downtown Boulder, Herr, 43, and Tomecek, 40, have been honored with dozens of regional AIA awards for their growing portfolio of residential and commercial projects, most of them located in Colorado. Each has won the AIA's Young Architects Award—Herr in 2011, Tomecek in 2012.

These days, they're busy juggling multiple projects, including a multifamily development in Denver (Framework at Sloan's Lake) that just broke ground, and an 11,000-square-feet, net-zero-energy house on the plains northeast of Boulder. They recently hired two additional architects, bringing the total number of employees to seven. "And we probably need to hire one more," Tomecek says.

In person, Tomecek is friendly but intense, a self-described "big picture" guy who in conversation tends toward the abstract. Herr comes across as more down to earth. "I'm more interested in details," he says, "so it makes for a good collaboration."

The architects met as graduate architecture students at the University of Florida in Gainesville. Herr, a Colorado native, had gone to pursue a degree in acoustics—he plays the French horn and has an undergraduate degree in music performance from the San Francisco Conservatory of Music. (His favorite composer: Gustav Mahler.) Tomecek, born in Hollywood, Fla., was interested in music of a different sort: heavy metal. "Total hair bands," he says. "Not that I'm looking to emphasize that." What brought them together, Tomecek says, was a shared "hyper passion" for design, and their conviction in its power to transform lives.

After graduate school, Herr settled in Boulder, where he worked for several local firms. Tomecek considered moving to Austin or Phoenix, but when he visited Herr in Boulder, a university town set against the foothills of the Rockies, he fell in love with the place. "I went camping, rock climbing, and snowboarding," Tomecek says. "I said, You know what? I'm moving here. This place rocks."

Eventually, Herr and Tomecek decided to form a partnership, with $600 in the bank. They rented a one-room office in a red-brick building on Boulder's Pearl Street pedestrian mall.

Eight years later, the firm is still there, in a slightly bigger office down the hall: a single room with an adjoining windowless conference space that overflows with wood and cardboard models of their work. There are no cubicles and no room dividers. Tomecek admits that space is tight, "but at the same time, it's very open and very collaborative. It's not like I'm always behind a door and you have to knock to come in."

ONE OF THE PARTNERS' FIRST projects together was Box House, a home for Herr and his family. The 2,300-square-foot house was built on a steep parcel of land in Boulder that had been in Herr's family for years. The construction process was documented by both HGTV's Dream House series and the *Rocky Mountain News*. (The media attention helped put Studio H:T on the map.) In keeping with Herr and Tomecek's interest in green design, the house has walls made of structural insulated panels, in-floor radiant heating, and solar photovoltaic panels that produce 85 percent of the home's electricity.

Since then, they've created something of a niche for themselves by designing energy-efficient houses on challenging urban infill lots. For example, in Denver's hip Highland neighborhood, where the lots tend to be long and narrow, a client wanted some privacy from the three-story triplex next door. Herr and Tomecek's solution: a two-story structure with a curved metal wall that "shields" the house from nosy neighbors while also serving as a striking visual element. (Fittingly, they dubbed the project Shield House.)

A few blocks away, the firm built Tomecek's own wood-frame house on a narrow lot as an exploration in modular construction. The structure was assembled in a factory north of Denver in just three weeks and then lifted onto the property (125 feet long, 25 feet wide) by crane, in two pieces, one for each floor. Once in place—on top of a poured-concrete foundation—the exterior walls were covered in stucco. Ingeniously, the floors are offset lengthwise, creating a deck off the second-floor master bedroom and a covered rear entry on the ground floor. A separate garage was built on site. The house, called 32nd Street Modular, earned LEED Silver certification.

"SOME ARCHITECTS PRACTICE IN A PARTICULAR STYLE," HERR SAYS. "BUT THAT'S NOT WHAT WE DO. WE ASK AND ANSWER QUESTIONS ABOUT THE SITE, THE CLIENT, AND THE PROGRAM. AND THAT'S WHAT LEADS TO THE ARCHITECTURE."

Renderings from Framework at Sloan's Lake in Denver. Studio H:T just broke ground on the 22-unit project, which includes single-family and multifamily residences.

Also in Denver, the firm was hired to design an addition to a small commercial sign business located in a former motorcycle repair shop. The only stipulation from the client, who contacted Studio H:T after seeing Shield House, was that he couldn't close his business during construction. That led Herr and Tomecek to "wrap" the addition, made of rusted steel panels, around the existing brick structure.

In one of their more ambitious partnerships, the firm worked with Vireo, a Boulder-based developer, to design a multimillion-dollar "eco-hyperluxury" home. Built on a steep hillside in Boulder and completed in 2010, the 4,679-square-foot house incorporated energy-efficient, wood-based, hypo-allergenic panels made by WeberHaus, whose factory is based in Kehl, Germany. Tomecek says that Vireo intended to use the house as a showcase for its plans to open a U.S. factory modeled on the German company. But the recession hit, Vireo went under, and the house sat on the market for several years.

It recently sold, and on the day I visited the house—named for its address, 2002 Alpine—with Herr and Tomecek, we met the new owner, an American chemical engineer who had spent two years living in Geneva, Switzerland. "This is the house for an engineer," he said. "I love the design and the way it's constructed." The house, with its superinsulated walls, is projected to use just 18 percent of the energy of a typical American home. "I think the electrical bill will probably end up being about $10 a month," he said.

Next door, on a similar property, Herr and Tomecek worked with another developer to design a dwelling they call Fractured Residence. Like the Shipping Container House, it is splayed—one end is wider than the other—and the architects broke up the open interior space with irregular, sharply angled supports and railings. Unlike the boxy 2002 Alpine house, it was built using conventional stick-frame construction, which allowed Herr and Tomecek to forgo traditional right angles. Think of it as the flamboyant neighbor to the Teutonic dwelling next door.

I ASKED HERR AND TOMECEK if there's a connecting thread that runs through their diverse body of work. Certainly it's not a particular visual style, though there are aesthetic similarities among their buildings. And it's not a particular material, either. ("We don't think that prefab is a global savior," Herr says, "and we don't think that stick-frame construction is at the end of its lifespan.") Clearly, sustainability is a common element, but they resist the "green" architecture label because it's merely a starting point for everything they do. (Herr and Tomecek both have LEED credentials.)

"I think what underpins our work is a progressive series of investigations," Herr says. "It's all about looking at alternative methods of construction in a quest for the right system for the job. So there's a common thread of systems exploration, combined with thoughtful interaction with clients to address their needs."

And while Herr and Tomecek resist labels, they concede that there may come a time where they won't have to start from scratch every time they begin a new project.

"We've done a lot of projects that are very one-off and unique," Herr says. "We'll probably hit a point where we say to ourselves, 'OK, these are the things we want to continue with, whether it's a material, or a manufacturer for a window, those types of things.' But we're not there yet."

STUDIO H:T

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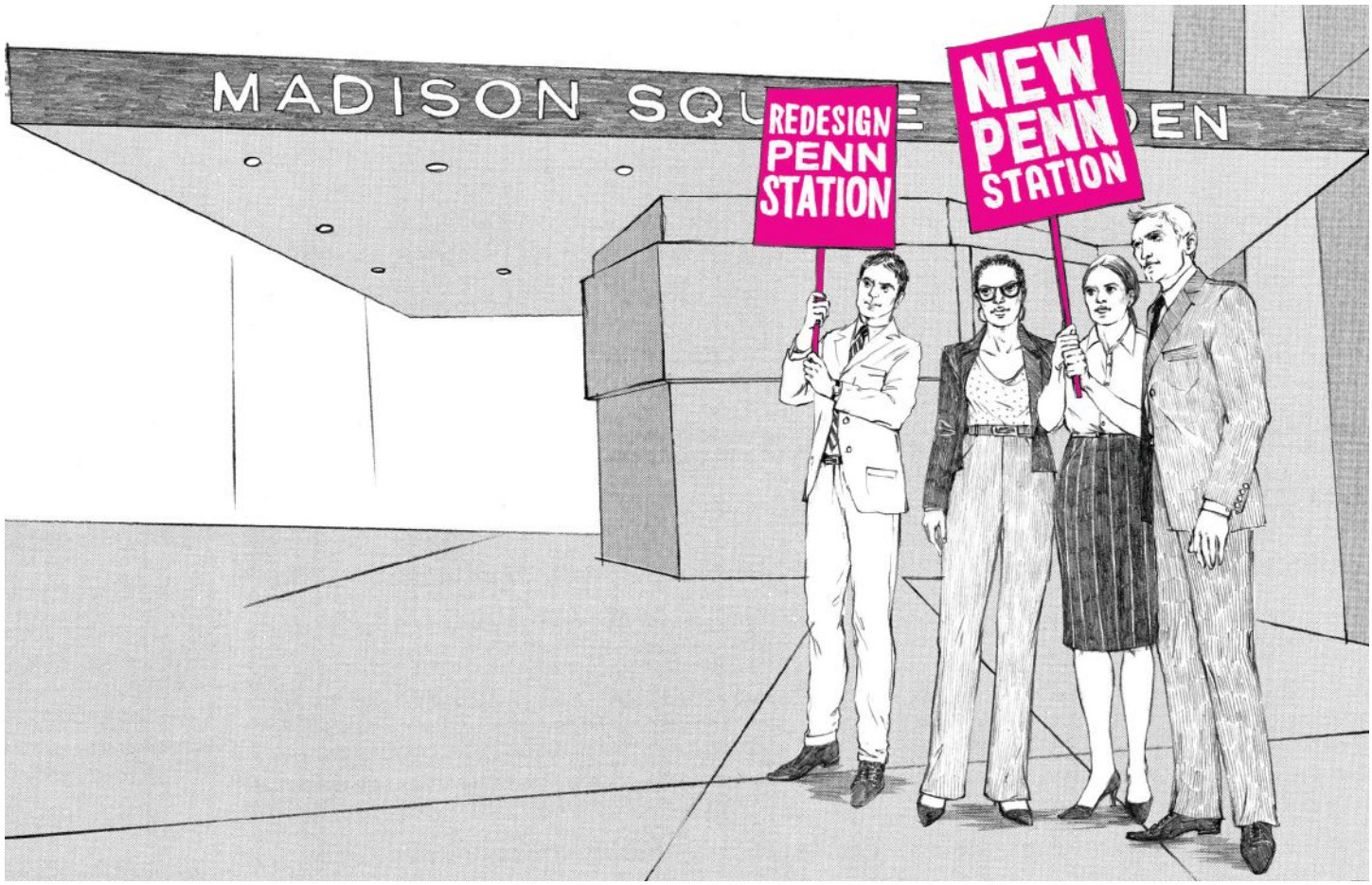

POLITICS

GARDEN VARIETY DISPUTE

THE MOVEMENT TO REBUILD A RIGHTFULLY GRAND PENN STATION SEEMS TO BE GATHERING MOMENTUM.

Text by **Matt Chaban**
Illustration by **Lauren Nassef**

IF ONLY ELIOT SPITZER had kept it in his pants, you probably wouldn't be reading this right now. "It is absolutely true that were it not for 'Client 9,' a deal would have been reached on the Garden and Penn," insists Vishaan Chakrabarti, AIA, director of Columbia University's Real Estate Development program and a partner at SHoP Architects. "We were weeks away from a deal when Eliot got caught."

Indeed, the same week in March 2008 that *The New York Times* revealed the governor's peccadillo in the nation's capital, he was scheduled to have a meeting with the three railroads, two developers, and one arena operator, as well as city, state, and federal agencies, and the sundry bureaucrats and advocates all involved last decade in finding a new home for "the world's most famous arena" and the nation's busiest transit hub. Madison Square Garden (MSG) and Penn Station had been wedded in unholy matrimony more than four decades prior by Pope Superblock himself, Robert Moses. Everyone was hoping for a very happy and lucrative divorce, including Chakrabarti, then leading planning on the project for the developers, the Related Companies and Vornado Realty Trust, two of the city's largest private landlords.

The arena would have moved into state-of-the-art facilities across Eighth Avenue, inside the old James Farley Post Office, Penn would have been reborn on its current site, and millions of square feet of air rights would have been unleashed onto the surrounding blocks, fusing new development along the High Line and Hudson Yards into the Manhattan core.

But then the governor's libido got in the way. More than lusting after a lost dream, there is good reason to dwell on this history. While it

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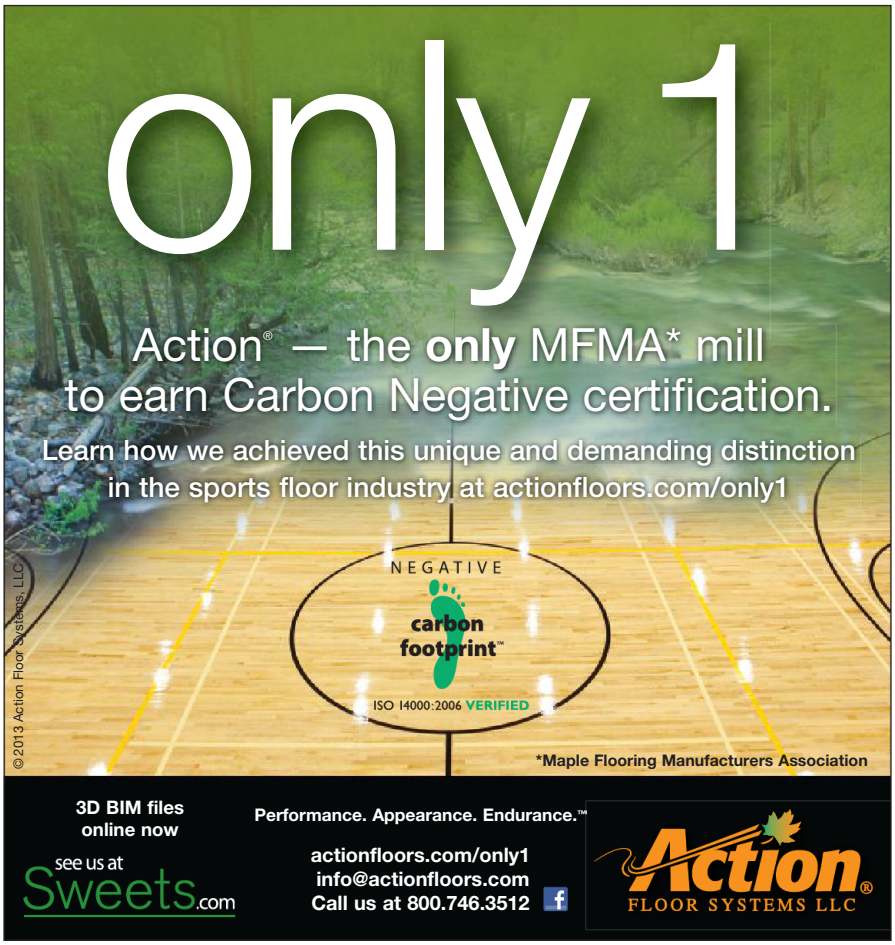
The concourse of the original Penn Station, completed in 1910 and designed by McKim, Mead & White.



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may be true that New Yorkers are too given over to a certain debilitating strain of nostalgia—such as the obsession with a Penn Station few can remember and fewer have experienced—they also love a good fight, and a new one is beginning to shape up over the fate of the arena and the station. If the plan is to succeed this time, it must build on the mistakes and victories of the past without being slaves to them.

It turns out an unexpected gift from Moses is making much of this latest debate possible. Before construction started on the Garden in 1964, it was endowed with a special permit that allowed the arena to operate on the site for 50 years before coming up for renewal. While many planners regard the decision to level the old Penn and build the Garden on top as the single worst ever made by the New York City Planning Commission, the permit has become their saving grace.

Initially, the Bloomberg administration—and especially the owners of Madison Square Garden, in the midst of three-year, $980 million renovation—had hoped the permit would be quietly approved in perpetuity, according to those involved in the reapproval process.

But the Municipal Art Society of New York (MAS), saviors of Grand Central, and the Regional Plan Association (RPA), champions of the previous Penn plans, learned of the permit and quickly grasped the potential to use it as leverage to reopen the debate over the station.

The groups put together a new coalition to push for a limited permit on MSG, which MAS and RPA pegged at a decade. "This gives everyone plenty of time to get their acts together," says RPA president Robert Yaro. The time line fits with other current plans to bring new Amtrak tunnels and high-speed rail into the city over the next decade. The groups also reached out to *The New York Times*, where architecture critic Michael Kimmelman and the editorial board helped build political and public support.

In March, Manhattan Borough President Scott Stringer sided with the 10-year camp, and even helped develop a legal case for it that has given the planning commission, which holds the real power on land-use issues, the framework to support a limited permit. The commission decided to extend the term limit to 15 years, a split-the-difference compromise that, in light of decades-spanning megaprojects such as the World Trade Center or Hudson and Atlantic Yards, seems appropriate. Said Amanda Burden, chair of the planning commission: "This is a moment in time that could—and should—have historic consequences for the city."

The push could still be overturned later this summer by the city council and its speaker, and mayoral hopeful, Christine Quinn. She once partnered with the owners of the Garden to

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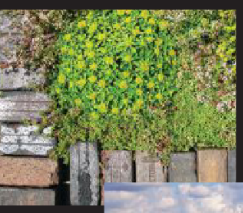
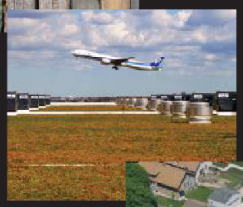

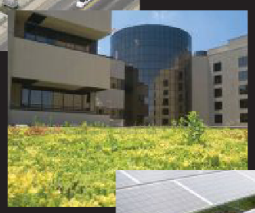

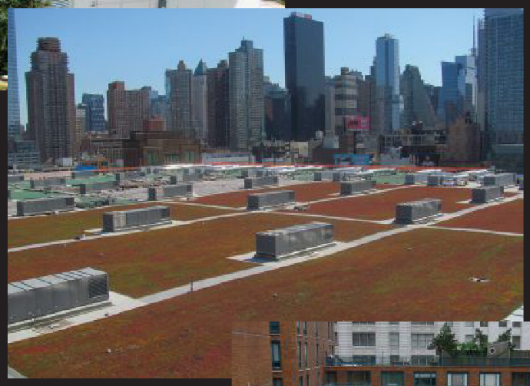

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defeat Mayor Bloomberg's dreams of building a stadium at Hudson Yards for football and the city's 2012 Olympics bid. "We're going to do everything we can to make sure that doesn't happen," MAS president Vin Cipolla said.

Should the advocates succeed at the council with some term limit intact, that is when the real politicking will begin. The term limit is meant to put pressure on the Garden to relocate, but its real target is as much the political class as anyone, which has been grappling with expanding Penn since the late Sen. Daniel Patrick Moynihan (D-NY) first proposed the idea of moving part of the station into the old post office in 1990. Since then, the project has grown and shrunk, collapsing more than once under its own bureaucratic weight. "We've got to rally the troops to get this to happen," city planning commissioner Anna Levin said at a public meeting in March. "It goes beyond these walls."

Most crucial will be public support. To kick things off, MAS launched an architecture competition—"an architectural provocation," as Cipolla puts it—to come up with new schemes for both the station and the arena. "A world-class city needs a world-class train station, but it also needs a world-class venue," Cipolla said.

He tapped four of the city's most prominent firms to tackle the challenge: Skidmore, Owings & Merrill, SHoP, H3 Hardy Collaboration Architecture, and Diller Scofidio + Renfro (DS+R). "The current Penn and MSG are a blight on the city," Charles Renfro, AIA, said. "It's inhumane and humiliating to pass through either, and it's up to us to make sure something gets done."

Surprisingly, the DS+R proposal is the most conventional, at least as far as the siting goes. The firm is maintaining the current Penn footprint and moving the Garden into the back of the Farley post office, as was the case before. Above the station will rise "a great new civic center for 21st-century New York," Renfro said. "It goes from fast-to-slow, trains and grab-and-go below, to more relaxed and contemplative uses above."

The complex will be dense but not tall, light and heavy at once—"aerated," as Renfro puts it. "We want to create something monumental, but for our fast-moving digital age," he said. The idea is to bring mobility back to what is a very rigid location now.

H3 and SHoP have each taken a broader approach, focusing on the entire surrounding district, one of the few corners of Manhattan that is still rough around the edges—in large part because of the problems at Penn. John Fontillas, AIA, the partner in charge at H3, calls his firm's approach "holistic," and it begins with taking a page from Kimmelman and moving the Garden to the site of the Jacob K. Javits Convention Center along the Hudson River. There would still be a transit connection, with

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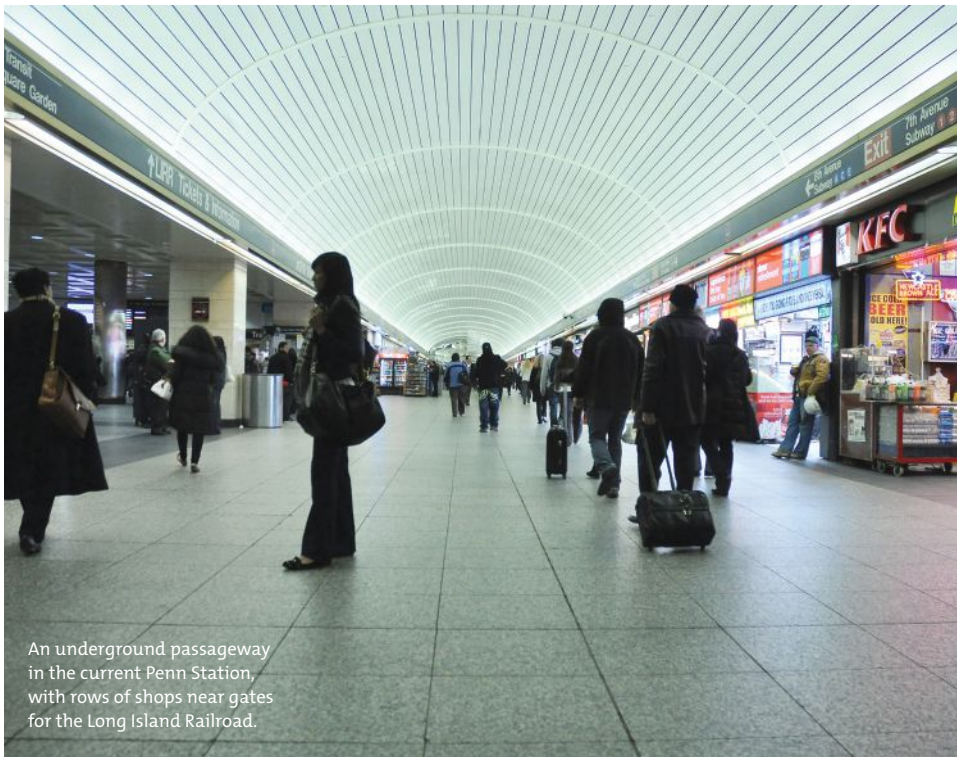

An underground passageway in the current Penn Station, with rows of shops near gates for the Long Island Railroad.

the new No. 7 subway extension to Hudson Yards. "The arena is just as important as the station, and we have to think about how it can be tied into its surroundings, with Times Square, the Chelsea arts district, the Theater District, and the conventions all right there," Fontillas says.

SHoP wants to create the city's first "Innovation District," and points to London's King's Cross as a model, where the station was rebuilt recently by John McAslan + Partners. (Tech startups and high-end shops quickly followed, and now Google has its European headquarters there.) The Garden would shift to a postal facility on 30th Street while still being connected to an expanded Penn, and the city as a whole, by an extension of the High Line. "How cool would it be to get off the train and hop on the High Line to go to a game or the galleries," Chakrabarti says.

Both SHoP and H3 had the same idea of a new tower of 2,000 or even 2,500 feet to the east of the Seventh Avenue station, a beacon signaling the new heart of the city—and one that would help pay for the station and the arena through the sale of air rights.

SOM took MAS's provocation to heart and did away with the arena. "Madison Square Garden could go anywhere," principal Roger Duffy, FAIA, says. "Frankly, it's a sideshow, and not something we should be focusing our energy on."

Instead, his firm offers perhaps the most defiant proposal: doubling the size of Penn by annexing the adjacent blocks (which is likely to happen anyway when high-speed rail comes in two decades) and creating a park on top. Floating 200 feet above it all, Superstudio-style, is a new mixed-use complex, a visual marker for the station and the new neighborhood. Like DS+R's building, it would be designed to let daylight through.

These plans might seem an affront to the Garden, but there is good reason to believe that arena owners would support one for the right price. Already SHoP's Barclays Center in Brooklyn is stealing acts like the Rolling Stones and the Ringling Bros. Circus, despite renovations that have vastly improved the Garden's interior. The fact remains, it is the oldest arena in the country. And it has been reported that the arena could make back its almost billion-dollar renovation outlay in as soon as five years, thanks to broadcast rights, so that cost should not be a factor in the move.

"There is no plan for these stations [at Penn], so it is not fair to saddle the Garden with responsibility for them," Elise Wagner, the Garden's attorney, said at a public hearing in April. This could also be seen as a plea, though: Present us with a viable plan, as you did before, and we will go.

Even then, the risks are manifold. The plan could come undone yet again, and probably will. So it went with Battery Park City, with Hudson Yards, and with dozens of New York megaprojects. The advocates have to be prepared to carry on and keep pushing. "We know this is just the beginning," Cipolla says.

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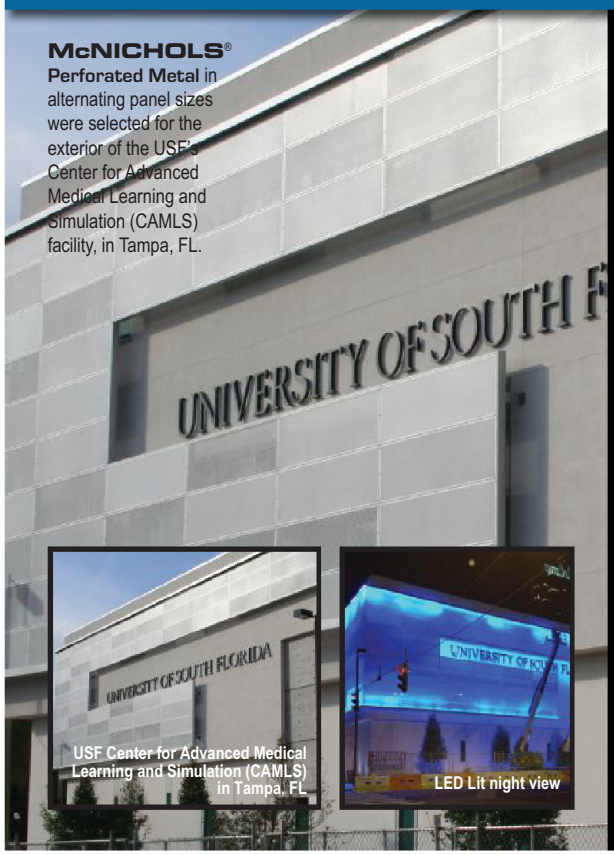

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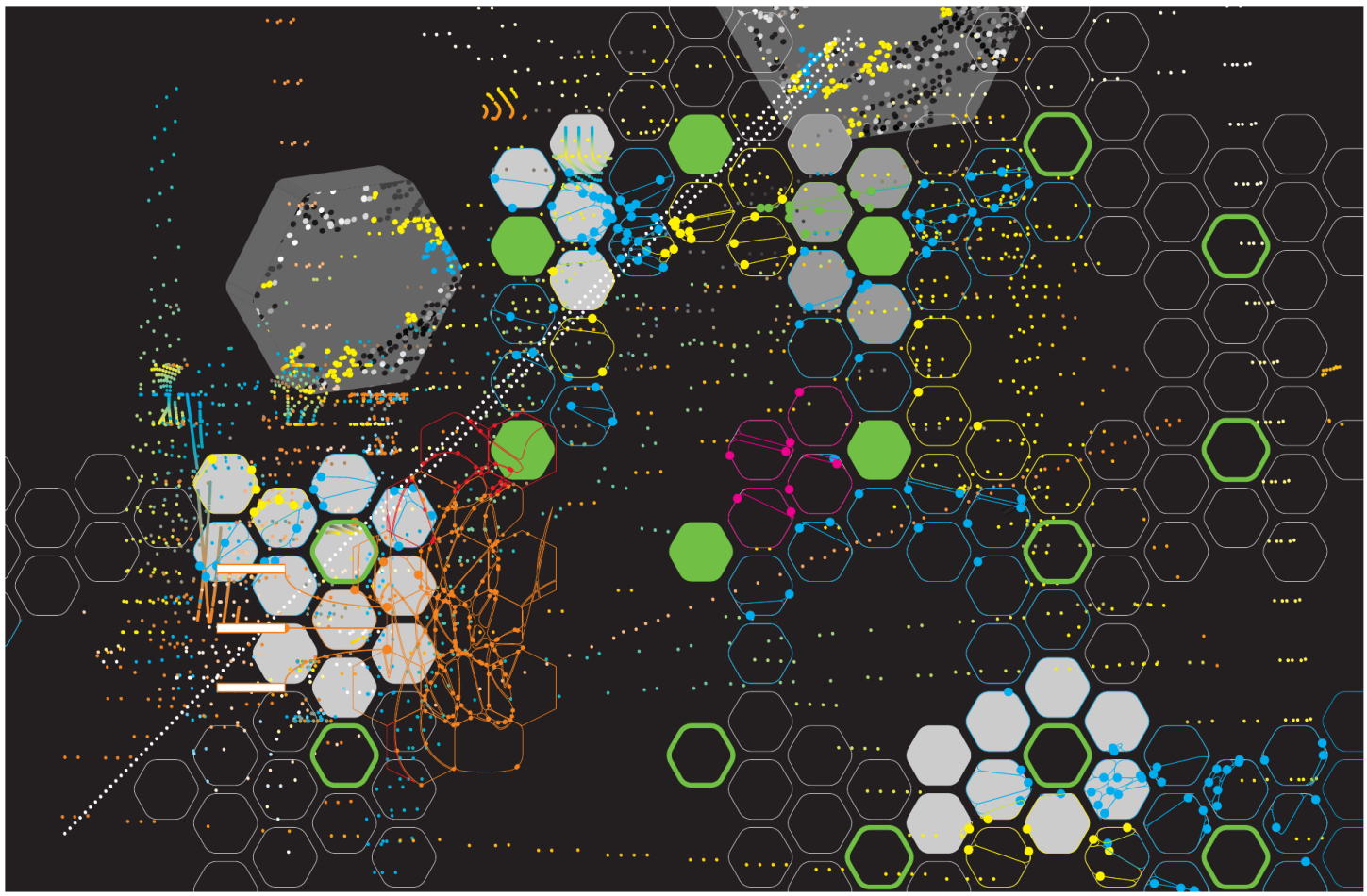

Text by **Witold Rybczynski, Hon. FAIA**
Illustration by **Paul Farrington / Studio Tonne**

ONCE UPON A TIME, schools of architecture displayed plaster casts of Ionic capitals and Renaissance portals for the edification of their students. Visit any school today and you're likely to encounter, either in one of the corridors or standing outside the building, structures resembling giant three-dimensional jigsaw puzzles made of interlocking pieces of laser-cut plywood. Such constructions, no less iconic than the old plaster casts, are the product of classes in the academy's current architectural obsession—parametric design.

Google *parametric design* and the first site that you will find is not a Wikipedia entry but a blog, Rethinking Architecture. The author, a Polish architect named Jarosław Ceborski, is rather vague about definitions, but he writes enthusiastically: "It's quite easy to distinguish something designed using parameters and algorithms from the rest, so it gives us a message, 'I'm contemporary, I was rethinked.'"

Tangled grammar aside, Ceborski captures the preoccupation with parametric design to create new "contemporary" forms, as evidenced regularly in student projects, and less frequently in the façades of trendy boutiques, edgy condominiums, and upscale department stores. One of the largest built examples is Foreign Office Architects' cruise ship terminal in Yokohama, Japan, a pier whose sinuous walking surface is said to have been inspired by traditional wave paintings. According to a primer on parametric design by the AIA California Council, this project proves that "complex building forms correlated to a series

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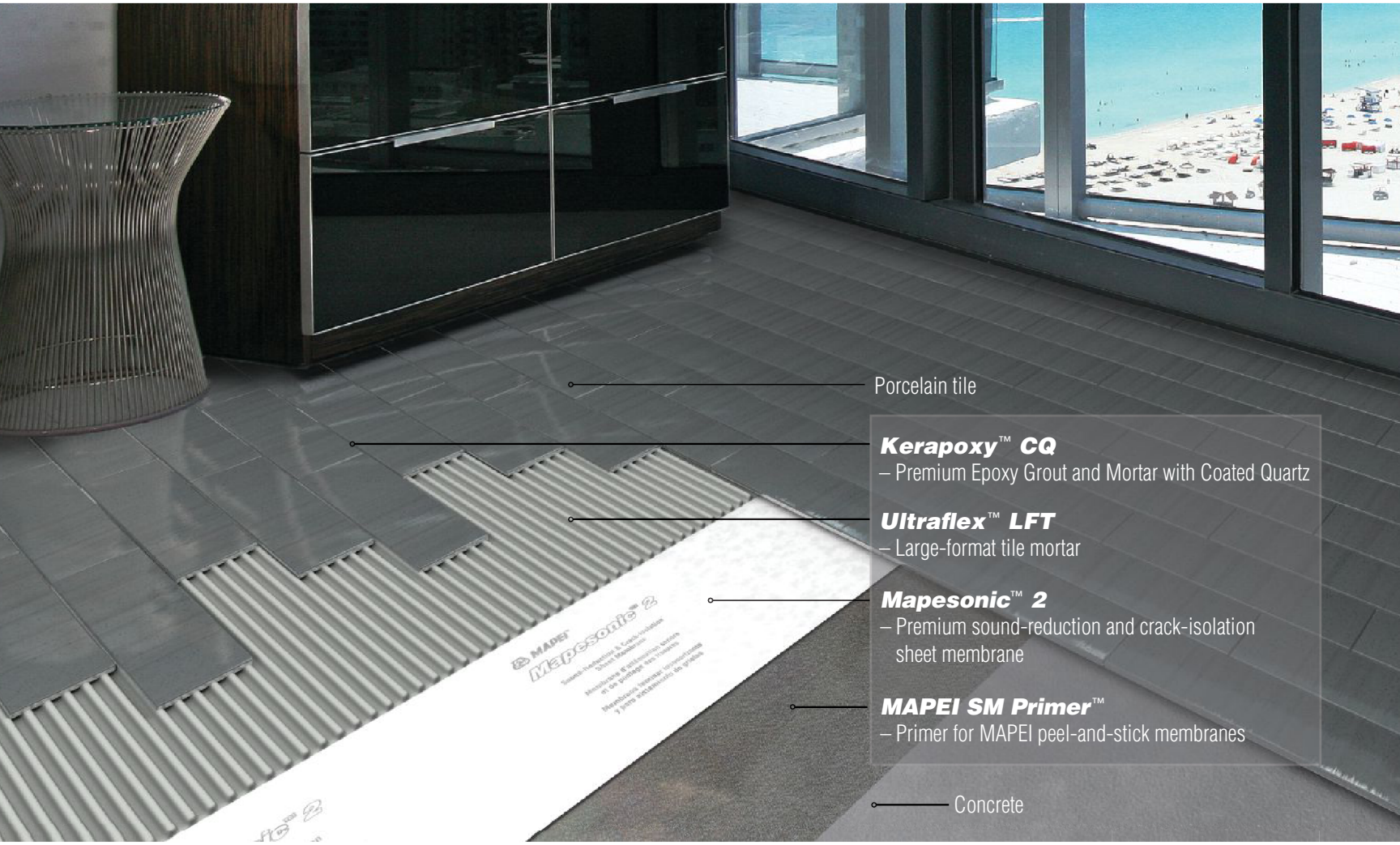

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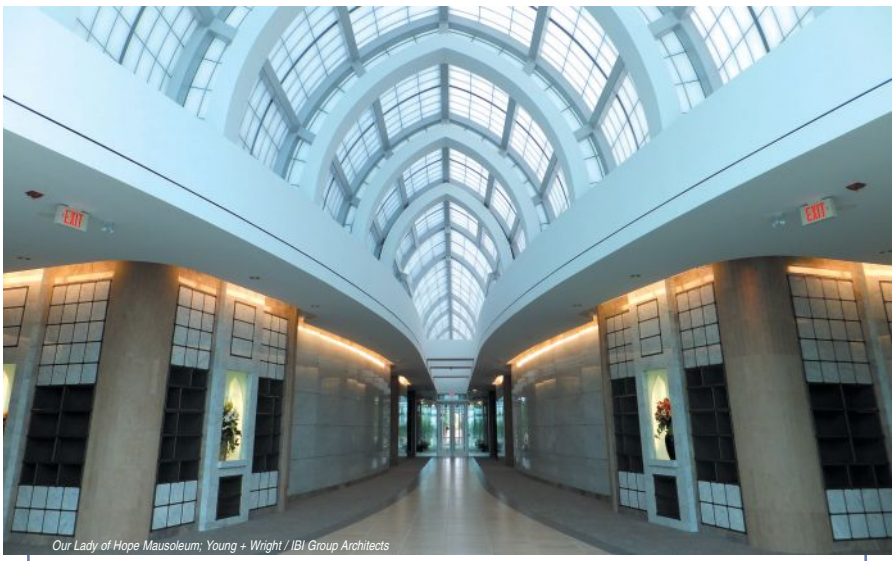
A view from above of the four-story lobby in Zaha Hadid's Guangzhou Opera House in China, whose sinuous shapes were computer-generated.



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of imagined or perceived parameters could be organized and constructed on a grand scale with dynamic, real-world results."

"Imagined or perceived parameters" sounds pretty arbitrary. Indeed, the algorithms that underlie parametric modeling are altered seemingly at will, and can rapidly churn out a variety of forms from among which the designer can choose. Perhaps that's why parametric design is so popular with students. Renzo Piano, Hon. FAIA, once told *Architectural Record*, "You know, computers are getting so clever that they seem a bit like those pianos where you push a button and it plays the cha-cha and then a rumba. You may play very badly, but you feel like a great pianist."

Even in experienced hands, parametric programs can produce alarmingly undisciplined results. The 2010 Guangzhou Opera House by Zaha Hadid, Hon. FAIA, is a poster child for the caulking industry. The Harvard University historian Antoine Picon, author of *Digital Culture in Architecture*, observes that "the capacity of the computer to transform almost every formal choice into a viable constructive assemblage reinforces the possibilities offered to the architect to play with forms without worrying about their structural implications too much." The disadvantage of this play, which he also points out, apart from elevated construction costs—and caulking issues—is that the morphological forms produced are oblivious to the past. This gives parametrically designed buildings an up-to-the-minute quality. Although they look sci-fi futuristic, they are also curiously one-dimensional, for nothing ages faster than yesterday's vision of the future. Just ask Jules Verne.

Not all parametrically designed buildings are "architecture rethinked." In the hands of Nicholas Grimshaw, AIA, and Norman Foster, Hon. FAIA, computational tools are used in the service of mainstream Modernism, as with the curved structure of Grimshaw's Waterloo International Terminal in London, or Foster's undulating courtyard roof of the American Art Museum and National Portrait Gallery in Washington, D.C.

The spherical geometry of the ArtScience Museum of Moshe Safdie, FAIA's Marina Bay Sands in Singapore is based on a series of spiraling and converging arcs. The first parametric studies were done on the graphics software Maya, according to Safdie principal Jaron Lubin, Assoc. AIA. "The team built the model such that one could adjust isolated geometric parameters to test different design options very quickly." Later, the architects shifted to Rhino, to share 3D information with structural engineers at the global design firm Arup, which pushed the information

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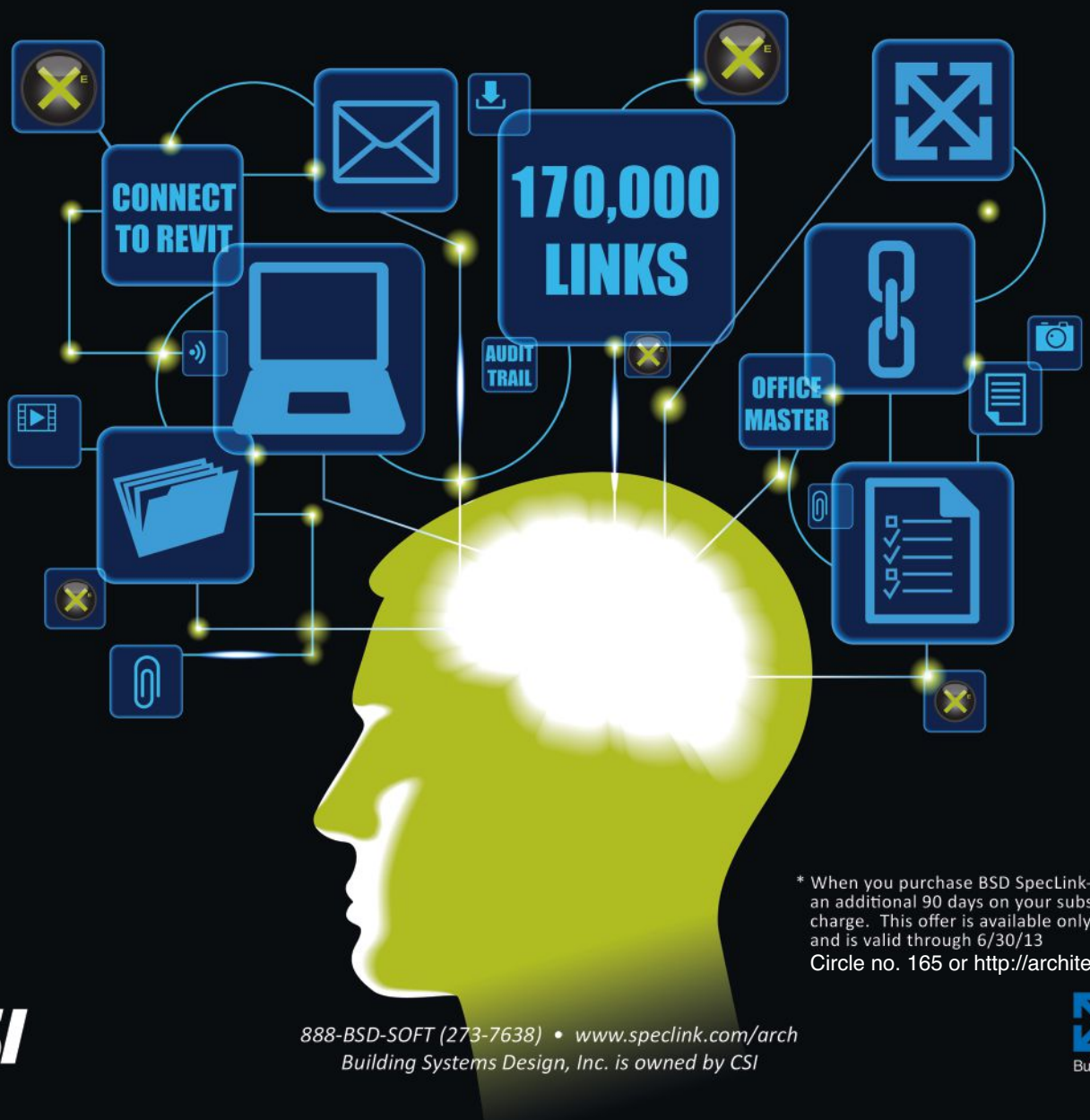

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Then there is Patrik Schumacher, who has promoted what he (awkwardly) calls "parametricism," not merely as a useful tool, but as the enabler of an entirely new kind of architecture, a new aesthetic. Parametricism means no more axes, no more regularity, no more symmetry—nothing that smacks of the great architecture of the past. "Avoid repetition, avoid straight lines, avoid right angles, avoid corners, avoid simple repetition of elements," he advises in the defining manifesto he wrote for the 2008 Venice Architecture Biennale. "Hybridize, morph, deterritorialize, deform ... consider all forms to be parametrically malleable." Stated that way, parametricism sounds as if it has more to do with taste than with problem-solving.

Schumacher describes parametricism as a deliberate response to an increasingly heterogeneous society. "The task is to develop an architectural and urban repertoire that is geared up to create complex, polycentric urban fields, which are densely layered and continuously differentiated," he writes.

That society has become more fragmented and heterogeneous is unarguable, but the conclusion that a fragmented public wants—or needs—a fragmented architecture strikes me as idiosyncratic. What characterizes modern society is not confusion, but a confusion of choices—in movies, music, entertainment, information, food, and dress. No wonder we have such a wide range of building designs: traditional as well as avant-garde, familiar as well as unusual, Cartesian as well as morphological. Parametricism may be one answer—although exactly to what question remains unclear—but it's certainly not *the* answer.

IS THE MOST EFFECTIVE use of parametric software simply to generate unusual forms? Architects have been deliberating on how best to use the computer ever since Ivan Sutherland invented Sketchpad (the ancestor of CAD) in 1963. Two years later, a seminal meeting on "Architecture and the Computer" took place at the Boston Architectural Center. In attendance were such luminaries as Walter Gropius, Yale's Serge Chermayeff, the structural engineer William LeMessurier, and Marvin Minsky, the co-founder of MIT's artificial intelligence lab. The architects imagined that computation would take over repetitive operations in the design process, but Minsky (correctly) predicted that the computer held much more in store. "We can use a computer to execute a procedure that is not just more tedious," he said, "but more

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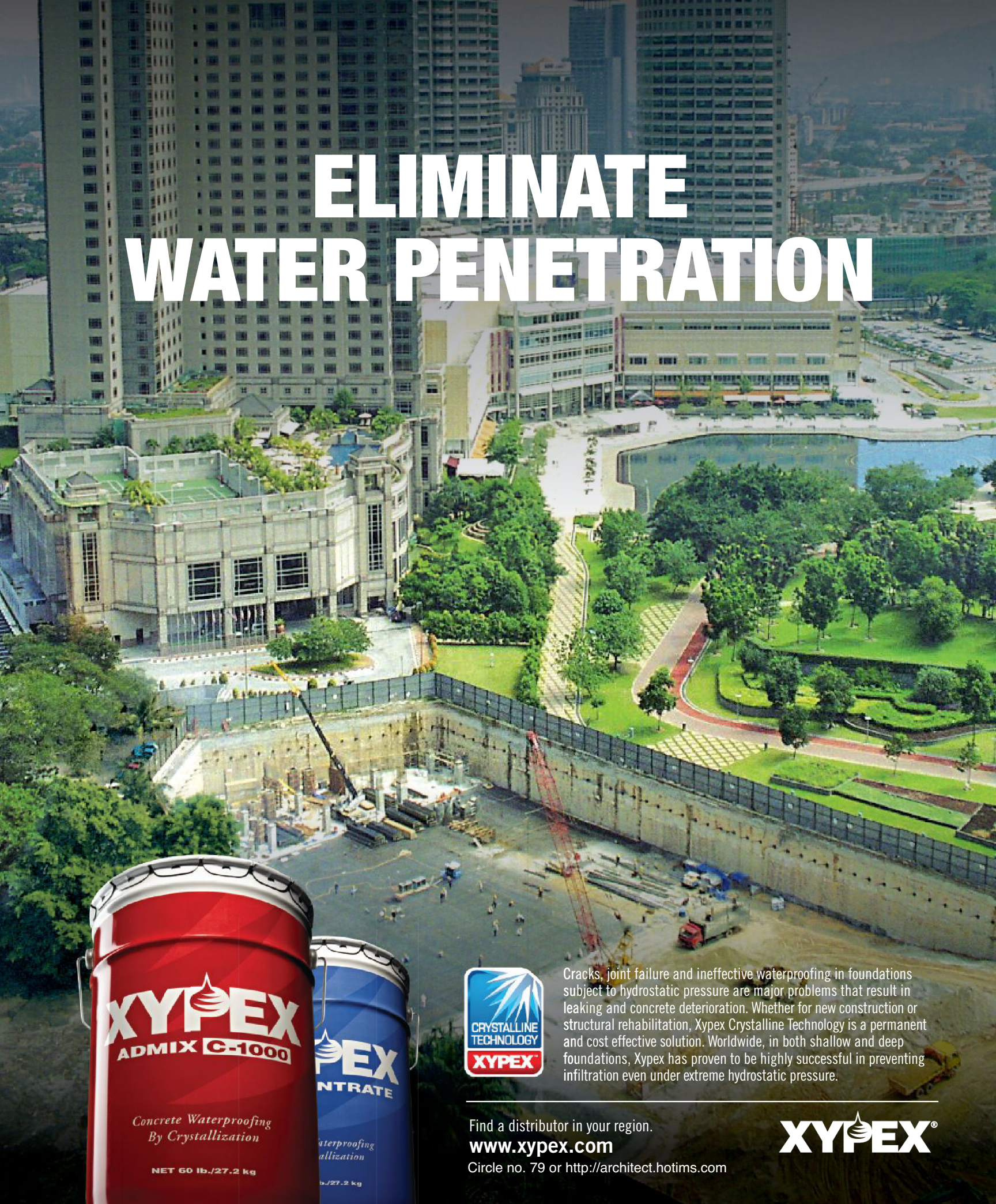

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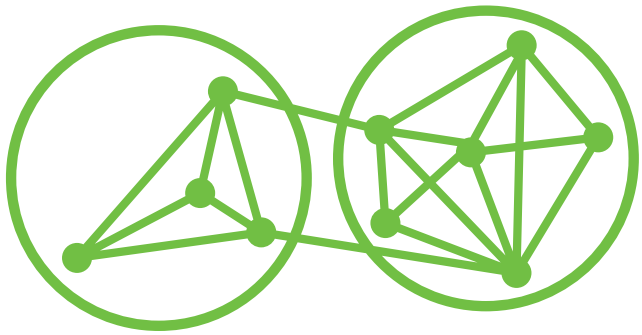

Christopher Alexander's book, *Notes on the Synthesis of Forms*, includes this diagram, intended to illustrate how design problems can have a series of linked variables that operate in independent subsystems.

complicated than anything we can ask humans, including ourselves, to do."

Complexity was precisely the concern of Christopher Alexander, an architect who that same year published *Notes on the Synthesis of Form,* a small book with an ambitious message. "My main task has been to show that there is a deep and important underlying structural correspondence between the pattern of a problem and the process of designing a physical form which answers that problem," Alexander proclaimed. His thesis was that any design problem could be rationally broken down into overlapping subsets of functional requirements, and that these sets had a hierarchical relationship. He gave a kettle as an example, and listed 21 specific patterns that governed its design: "It must not be hard to pick up when it is hot," "It must not corrode in steamy kitchens," "It must not be hard to fill with water," and so on.

Alexander's requirements, or "misfit variables," as he called them, follow the dictionary definition of a parameter—"a measurable factor forming one of a set that defines a system, or sets the conditions of its operation"—but his approach was parametric in a different sense than Schumacher's. Alexander didn't want simply to create more complex forms, he wanted to unravel the complexity of design problems.

In an appendix to the book, Alexander outlined a mathematical model that mapped the requirements of design problems. It was natural that he would turn to computation, since his dual degree from Cambridge was in mathematics as well as architecture. He and Marvin Manheim, an engineer specializing in information technology, wrote an IBM 7090 program that was published as an MIT research report titled "HIDECS 2: a computer program for the hierarchical decomposition of a set which has an associated linear graph."

As a student I devoured *Notes on the Synthesis of Form,* and a classmate and I got hold of the program, intending to use it in our thesis projects. HIDECS 2 was written in Fortran, and I recall laboriously entering the information onto stacks of punch cards. We couldn't get the program to run, however. Dismayed, we went back to working the old way, with soft pencils and yellow trace. I was later told—I don't know if this is true—that HIDECS 2 simply had too many glitches.

Oddly enough, Alexander himself had serious reservations about the use of computers in architecture. He was unable to attend the Boston meeting, but he did contribute an iconoclastic essay to the proceedings. "In the present state of architectural and environmental design, almost no problem has yet been made to exhibit complexity in such a well-defined way that it actually *requires* the use of a computer," he wrote. Alexander saw a real danger in architects' fascination with computing. "The effort to state a problem in such a way that a computer can be used to solve it will distort your view of the problem. It will allow you to consider only those aspects of the problem which can be encoded—and in many cases these are the most trivial and the least relevant aspects." This could still serve as a warning to the eager parametricists of today.

SINCE ALEXANDER WROTE THAT, a different application of the computer in architecture has emerged: building simulation. This computational tool models building performance in areas such as structure, energy, daylighting, artificial illumination, and acoustics. I asked Ali Malkawi, director of the T.C. Chan Center for Building Simulation and Energy Studies at the University of Pennsylvania, what role parametric design plays in his field. "In the building-energy-related area, parametric design is currently being used to search for energy-efficient solutions in façade design, optimal window sizing relative to lighting, and other similar applications," he said. "It's still very elementary and not widespread. Mostly it's used by academics in experimental classes, as well as by some consultants."

In his own 2004 research paper, Malkawi described how a genetic algorithm, which mimics the process of natural evolution, could be combined with computational fluid

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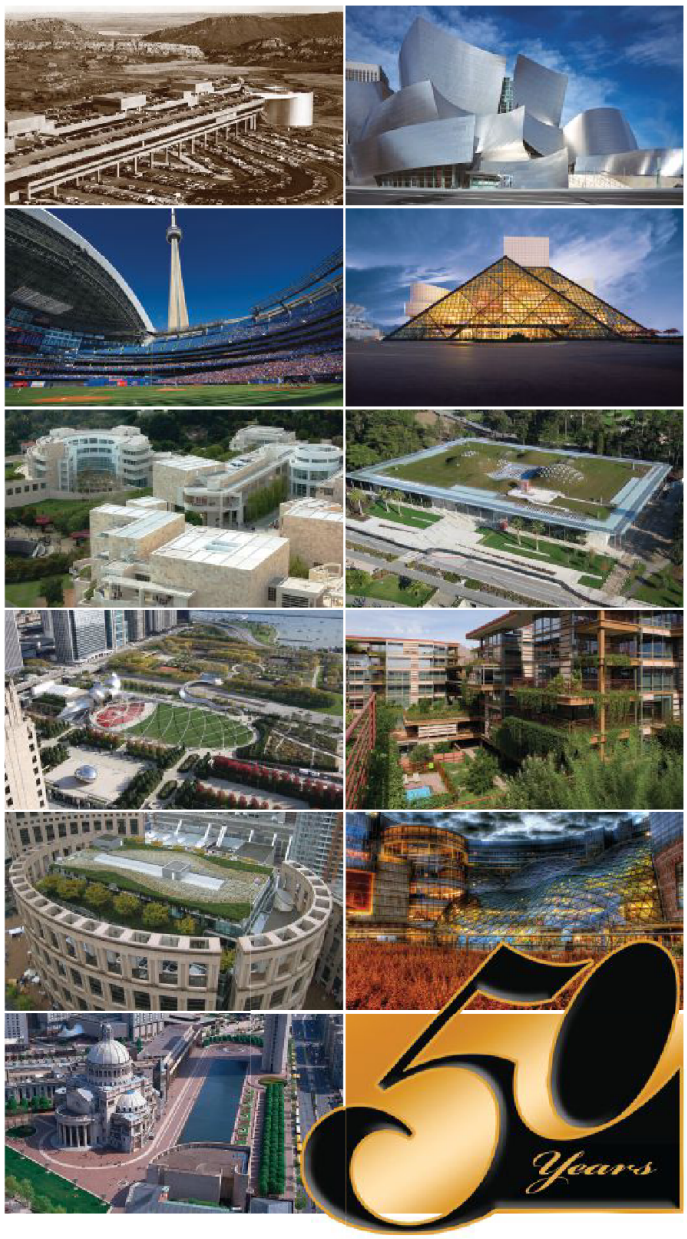

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dynamics to evaluate and optimize different design alternatives with respect to thermal performance and ventilation. However, he cautions that computer-generated designs based on performance targets are still some distance in the future. "Parametric design cannot provide comprehensive solutions due to the fact that the basic physics-based algorithms integration problem is still far from being solved."

What Malkawi means is that current building simulations treat environmental domains such as heating, air conditioning, ventilation, and daylighting separately, rather than as integrated wholes. Moreover, while heat and light are relatively simple to model, phenomena such as natural ventilation—a staple of "green" buildings—have scores of unpredictable, external variables, and have so far resisted precise modeling. Another limitation of today's building performance simulations is the dearth of what Alexander called "well-defined problems"—that is, a lack of coherent data. It is easy to determine the R-value of a wall, or the reflectivity of a surface, for example, but the dynamic energy performance of an entire building is also governed by its occupants' behavior: opening and closing windows, turning light switches on and off, raising and lowering blinds, and adjusting thermostats. Research on modeling human behavior is still in its infancy.

Somewhere between the vagaries of parametricism and the analytical precision of building simulation lies the Holy Grail: design informed by data gleaned from how buildings actually perform, and how people actually behave in them. This would require integrating building simulations, creating interaction between different domains, incorporating a myriad of variables, and, above all, devising a dynamic approach that accounts for the vagaries of human behavior, both over time and between individuals.

Even if the data for such a model were available, the question remains whether the immense difficulty of solving an "ill-defined problem"—for that is what a building is—would not overwhelm the solution, and whether the required computational complexity would be manageable, let alone affordable. Don't put away the soft pencils and yellow trace just yet.

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WORKSPACE

COLLABORATION STATION

ARCHITECT'S PUBLISHING COMPANY, HANLEY WOOD, NAVIGATES THE TRANSITION FROM PRINT TO DIGITAL WITH A NEW OFFICE SPACE DESIGNED BY BOSTON-BASED HÖWELER + YOON ARCHITECTURE.

The new open-office plan provides a space for collaboration between editors, art directors, and digital specialists.

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Text by **Katie Gerfen**
Photos by **Peter Aaron**

HOW DOES a media company use architecture to help make the transition from a print-first to a digital-first mindset? That was the question that faced Hanley Wood, the media company that publishes magazines including ARCHITECT, *Builder*, and *Remodeling*, when it was looking to renovate a portion of its Washington, D.C., headquarters. "As we're trying to transform the company and create this digital activity, there really isn't a path for how to do this," says CEO Peter Goldstone. "So people have to get together to communicate and create new ideas."

The team at Boston-based Höweler + Yoon Architecture took the notion of transition from "pulp to pixels," as they termed it, and created a collaborative office space that aims to change how people work, not just where they sit.

"When I first came to the company, I used to describe the offices as crypts—there were big heavy doors that rolled in front of your office and all of the sunlight went away," says Bob Benz, president of content at Hanley Wood. "We wanted to break down the walls between our brands, both physically, in the way that the building is structured, and in how

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Anchoring the southern end of the renovated office is the custom-designed and custom-fabricated Radar Desk, where the editorial department heads sit. Architect Eric Höweler likens the collaborative environment to an aquatic one, "where people are coming into a coral reef, like fish in this ecology of people."

the journalists at Hanley Wood work together." To that end, preliminary discussions focused not on design, but on how people work. "We talked about open lounge spaces, formal desks, cubicles, private offices—the whole gradient of work ecologies," architect Eric Höweler says. "We looked at how we could create these different spaces and allow people to work collaboratively, to work independently, and to focus and write."

Completed in April, the renovated space restores daylight and views of historic buildings in neighboring Thomas Circle to the formerly divided floor plate; the natural light reflects deep into the space, thanks to bright white walls that line the perimeter. An open-office area—outfitted with a benching system from Allsteel—accommodates editors, web producers, art directors, and other team members who collaborate on a daily basis.

A bar-height counter, which the architects call the Link Desk, hugs the wall along the building's central courtyard. "We moved the offices and the desks away from the courtyard, making it a space that you could flow around freely," Höweler says. "Locating benches or

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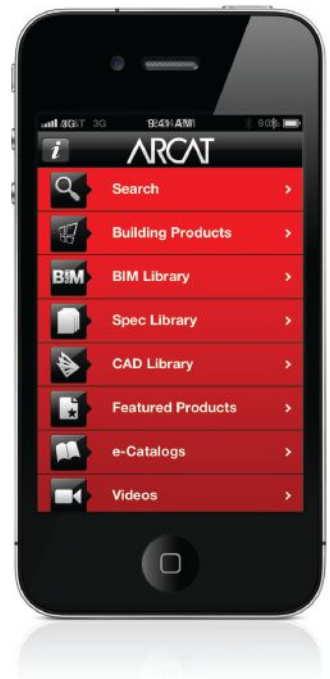

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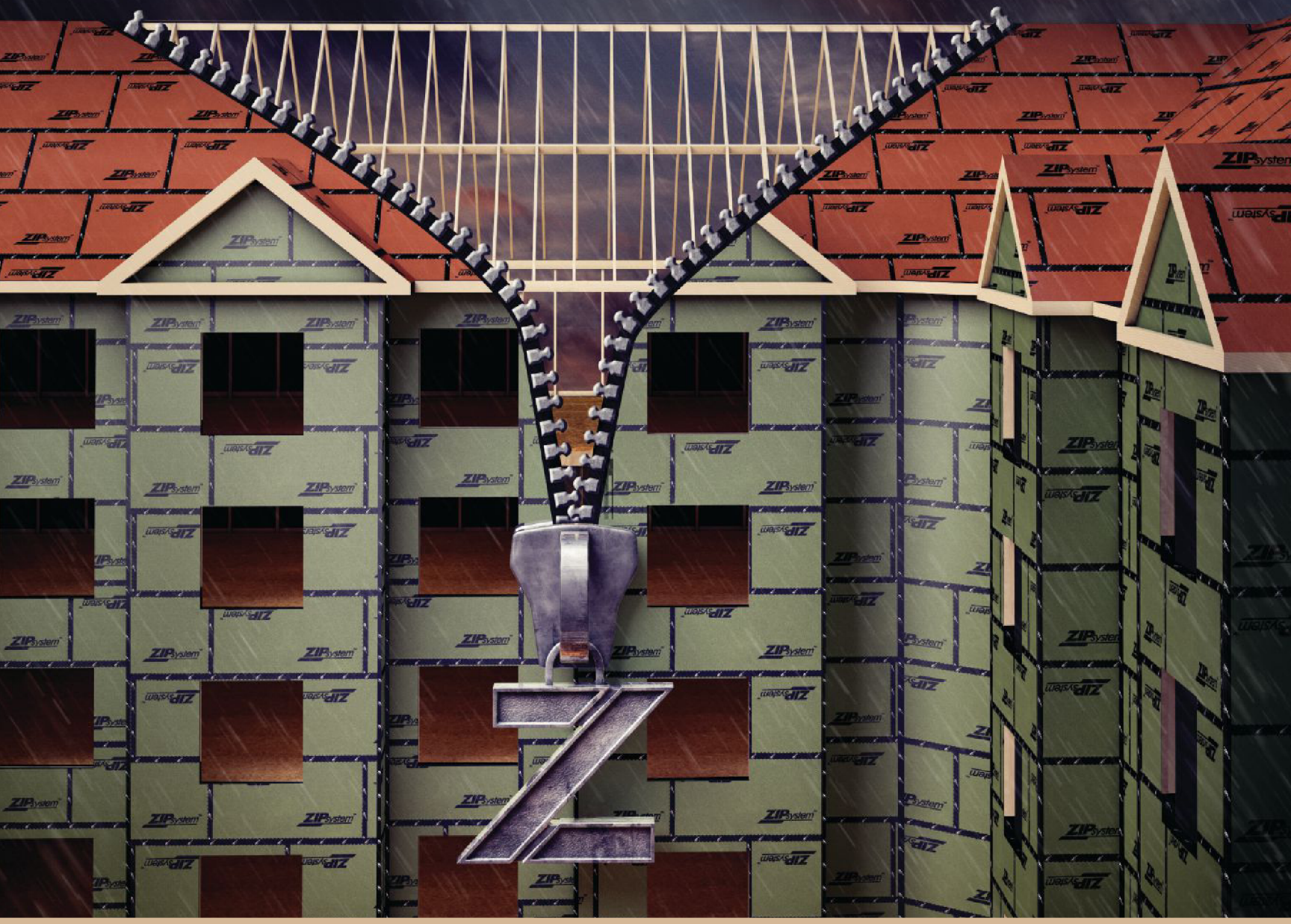

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Top: Whiteboard paint allows groups to workshop on the walls. "Some of them are having fun with it and drawing cartoons, some of them are doing business," says Hanley Wood president of content Bob Benz. **Above:** Höweler + Yoon created a custom lighting strategy: three-pronged fluorescent fixtures hang above the irregularly shaped Radar Desk and linear fixtures hang over bench seating. A spray-applied cellulose insulation on the ceiling dampens sound.

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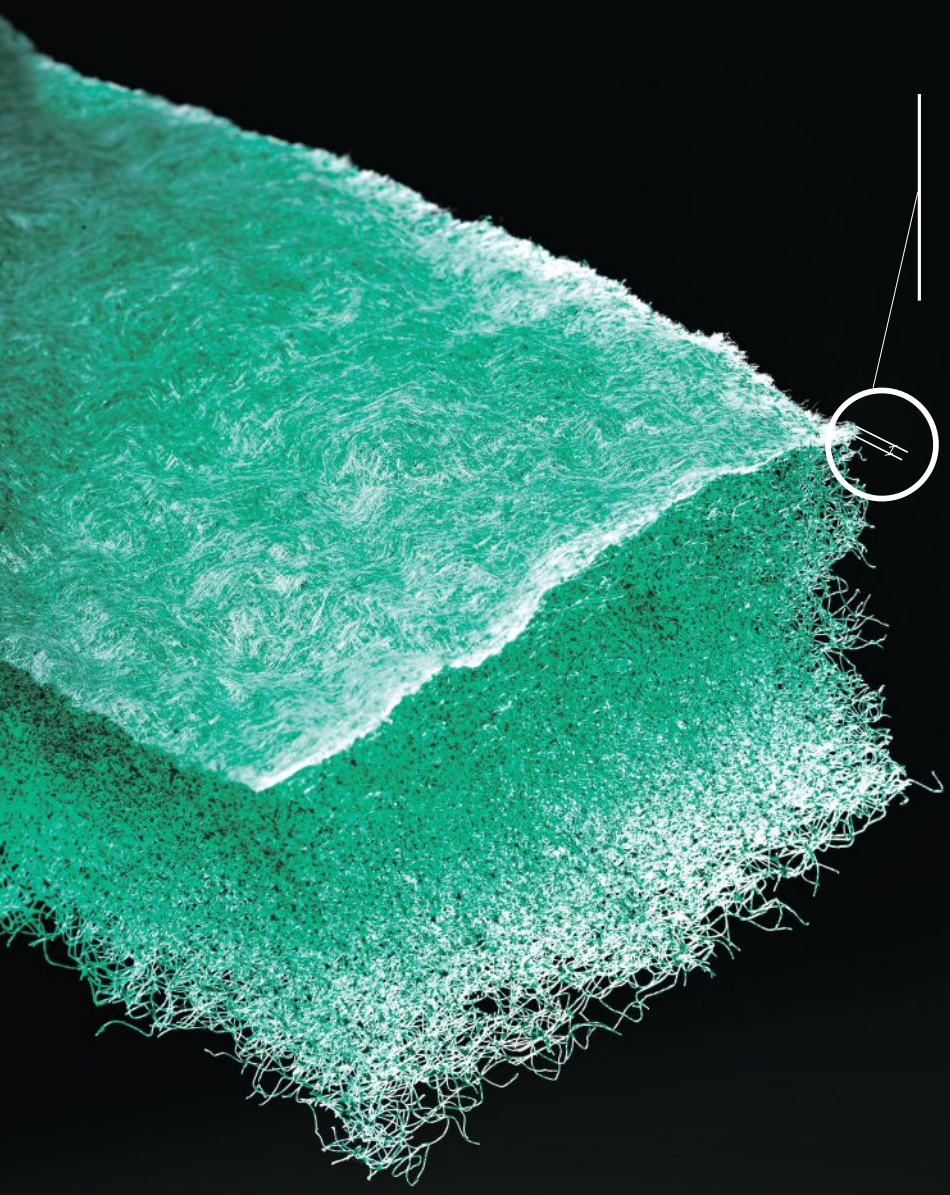

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The renovated office space includes five conference rooms, most of which boast views of neighboring Thomas Circle. The bright green of the walls is visible through the glass doors, and brings pops of color into the surrounding open-office space, which is predominantly white and gray.

counters there gives people an excuse to get up out of their desks and have an informal meeting." The Link Desk transforms at either end, becoming a low bench at one, and a table at the other; the hybrid built-in has become a social hub for the office.

Anchoring the design is the Radar Desk, a custom-designed work environment fabricated by Columbia Woodworking. Department heads are stationed at this sinuous table, allowing for managerial collaboration. "Some of the serendipitous conversations and discoveries that bubble up are pretty amazing," Benz says. Integral shelving supports the sculptural, laminated-plywood work surface.

Aware that meeting space is always at a premium, the team at Höweler+Yoon tucked five conference rooms behind undulated walls along the perimeter of the floor. Integrated shelving marks the doorway into each conference room and provides a space to showcase the company's magazines. Glass doors offer glimpses of the conference rooms' vivid apple-green walls.

Hanley Wood plans to use this space as a living laboratory, taking lessons learned from the open floor plan and using them to inform two future phases of construction that will complete the remodel of the entire floor. "We believe in testing. In science, you do a test and you repeat," Höweler says. But until then, even people in the untouched portions of the floor are already using the collaborative spaces: "When people bump into each other," Benz says, "is when really interesting things happen."

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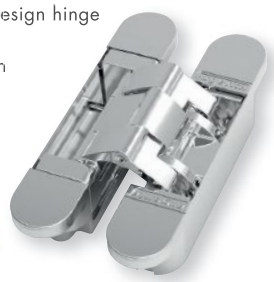

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Left: The Link Desk runs the length of the space along the building's central courtyard, and lowers to form a bench at one end. **Bottom:** At the other end, the Link Desk is a table that has quickly become a hub for collaboration, a marked difference from the existing space. "When you walked through our old office space, you didn't really see people—you saw doors," says Hanley Wood vice chairman Frank Anton. In the renovated space, "you see people—not only sitting next to each other, but meeting together. When you can just stand up and talk, you're having a conversation instead of a meeting—most people enjoy conversations more."

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THE COLOSSUS

THOM MAYNE HAS MADE THE TRANSITION FROM ENFANT TERRIBLE TO ELDER STATESMAN WITHOUT LOSING HIS GRIP ON SURREALITY.

GOLD MEDAL

San Francisco Federal Building, 2008

Text by **Ed Leibowitz**

THIS FADING APRIL AFTERNOON, just a few hours before the gala dinner celebrating its 40th anniversary, there's ample evidence that the Southern California Institute of Architecture remains as committed as ever to in-your-face provocation. Meander the Undergraduate Thesis and Spring Show exhibition and you'll spot torched soldier toys melting into a field of ashy sludge; a vest made of bisected rubber baby dolls linked together with safety pins; and a model of an office tower so contorted it might as well have been run through a food processor. The titles of the projects are playful ("When in Wien"), quasi-quantum mechanical ("Synthetic Conjunction"), or deceptively straightforward ("The Black City—Black Isn't as Easy as It Looks").

Even if he wasn't a Pritzker Prize–winner and newly decorated AIA Gold Medal recipient, Thom Mayne couldn't help but cut an outsized figure among the distinguished group of architects and academics who've gathered to critique the most promising senior class projects. Mayne, FAIA, towers above his colleagues at 6 feet 4 inches. The weave of his custom-made Italian suit jacket gives off an azure glow. His close-cropped brown hair and sparse beard culminate in tapered points more or less in alignment with a large, pugnacious nose. He settles himself in a folding chair across from a dozen balls of magenta, lemon, pink, and crimson with strategic slices taken out of them, deployed onto what looks like a residential tract. With hair slicked back, dressed in a de-rigeur black jacket, one of the student co-creators begins explaining this work in a way sure to make even the most sophisticated client's head spin: "Our thesis and our goal is to re-adapt a representational technique where a form's process and evolution is created through a system of axonometric cuts."

Most of the panelists, while not necessarily full of praise for the project, manage to be rigorous and supportive in their observations. Not Mayne. "Poor me," he says. "I just go back and fuck around in my little office, and I've got to deal with all the contingent crap of architecture. But isn't there a threshold where there has to be some minimum connection between technology, culture, political status, and social status—a connection with some idea of how we exist in the world? Can you operate with no conversations about any of those things?"

On the surface at least, the two students seem remarkably poised as Mayne shoots a few more barbs their way. "You did this stuff," he tells them, "and you're at the beginning of your career, and I'm about to hire one of you guys. So you come into my office, and the first problem I give, you fall down on your face: 'Oh my God, I can't do that,' because you've got 15 constraints in front of you." Mayne's argument moves inexorably toward questioning the mission of SCI-Arc itself. As a founding faculty member, Mayne was as responsible as anyone for making the school a laboratory of the avant-garde. Some of his colleagues rise to the students'—and SCI-Arc's—defense, bemused more than irritated by this latest episode of Thom being Thom.

Eric Owen Moss, SCI-Arc's director, who's known Mayne since the early '70s, tries taking his friend and colleague's concerns to a more constructive plane. "I think that the issue may be at the preliminary level of thinking and advising about the project," Moss, FAIA, says. "How are you doing this? Why are you doing this? What are the constraints? What are the possibilities? When you look at this thing, I mean for instance, why should it appear as a ball at the end?"

At the end of a debate that he's come to dominate, Mayne delivers a small consolation prize. "By the way," he tells the students, "we can have this conversation because this is a highly articulate, extremely skilled project."

Mayne leaves the exhibition hall in long strides towards the mid-section of the former Santa Fe Freight Depot, which now serves as SCI-Arc's downtown L.A. campus. He pauses just outside the makeshift banquet room where the catering staffers are scurrying about in preparation for tonight's dinner. He resumes his musing about the crop of young architects SCI-Arc is turning out nowadays. "Once they see a practice," he says,

LEFT: IWAN BAAN. RIGHT: KIM ZWARTS

Diamond Ranch High School
in Pomona, Calif., 1999

Wayne L. Morse Courthouse in Eugene, Ore., 1999

LEFT: TIM GRIFFITH / ESTO. RIGHT: IWAN BAAN.

Perot Museum of Science and Nature in Dallas, 2012

"they have so little relationship to reality, they're not even sure they should be architects." He compares their strivings to those of a would-be jazz musician, who plunges into improvisation without putting in anywhere near the 10,000 hours required to master the instrument. "These guys," he says. "They just want to be Miles Davis, but they didn't do any of the work."

LIKE MOST AMERICAN ARCHITECTS OF AMBITION, Thom Mayne, 69, had far more than 10,000 hours to hone his talents and develop his vision before he was permitted to create anything of lasting significance. In the past decade, Morphosis, the firm he established in 1972, has made its prodigious mark on Manhattan's East Village, with 41 Cooper Square, a 175,000-square-foot expansion of the Cooper Union college of science and art; on Dallas, with the Perot Museum of Science and Nature; and on San Francisco, with the U.S. Federal Building.

Nevertheless, until he turned 50, Mayne did his most influential work strictly on paper, and as a lecturer and theorist. His sparse portfolio of completed projects contained mostly residences, restaurant interiors, and the occasional office building. Over the course of so many competitions Mayne entered and lost, he developed a design palette incorporating fissures, fragmentation, and a semicollapsed geometry. Taking apparent inspiration from the firm's name, several of these projects looked like they were in the midst of a metamorphosis—caught in the process of becoming something else.

Blythe Alison-Mayne, who served as the financial manager of her husband's firm during many of those lean years, recalls how Mayne spent his time between commissions. "One of Thom's friends would say that 'busy hands are happy hands,' and he was talking specifically about Thom," Alison-Mayne says. "He would complete a house and then if there wasn't a new project, he'd rework it, even though it was already done. In that way, he'd re-inform himself of the design. That's the way he kept his brain busy."

Nevertheless, in the absence of any opportunity to make a major impact on the built landscape, busy work could only take Mayne so far. His reputation as a bad boy was solidified in middle age. "When I was 45," he says, "I was starting to get difficult. There was an anger I couldn't suppress, and a frustration at being ready to go full speed, and I still couldn't find the venue."

John Enright, FAIA, who currently chairs SCI-Arc's undergraduate program, worked at Morphosis for 13 years. He offers to clear up a common misconception as to why Mayne's firm couldn't seem to win design competitions. "For all Thom's reputation," Enright says, "his work was always buildable. But he was beautifully uncompromising."

Mayne found himself on the margins long before he began studying architecture. He was eight years old when his father, an executive with U.S. Steel, abandoned the family. His mother moved with her boys from Gary, Ind., to Santa Fe Springs, Calif., an industrial suburb just south of downtown Los Angeles. A concert-level pianist trained at the Sorbonne and the Chicago Conservatory of Music, his mother took a job at a department store and decorated the home with her reproductions of Modigliani paintings. Outside their front door, Mayne says, "it was like gangland." His first day of school, he was beaten and robbed of his jacket and bike. "I was a private kid," he says. "A very lonely kid."

As a student at the University of Southern California's School of Architecture, Mayne experienced a liberation of consciousness. "My grandfather was a Methodist minister," he says, "and my brother and I were very conservative puritanical Midwestern kids who went to church every Sunday. I came out of a family that the 1960s were made for." While earning his 1969 undergraduate degree, Mayne began defining himself intellectually and professionally as someone in total opposition. "Resistance was

Headquarters for the Giant Interactive group, a software company in Shanghai, 2011

IWAN BAAN

autonomy—and cause for celebration," he recalls. "It was the raison d'etre for your existence as an architect, and absolutely fundamental to your work."

Three years out of USC, Mayne held an assistant professorship at the California Polytechnic University at Pomona. He worked under architect and urban planner Ray Kappe, FAIA, who headed up Cal Poly's architecture department. After Kappe was fired over a disagreement with the administration, he launched SCI-Arc, and invited Mayne to join him. The school adhered to Kappe's rationalist vision—at least until the sensibilities of young professors like Mayne and Eric Owen Moss took hold. "The combination of architecture and science seemed important to me," Kappe says. "We were experimenting a lot more with structured environmental control systems, rather than with intuitive flamboyant design—whatever anyone felt like doing." By 1980, SCI-Arc had shifted decisively into Postmodernism, which held no attraction whatsoever for Kappe. He knew then it was time to leave.

From Morphosis's inception, Mayne favored collaboration over sole authorship. "It used to be a real art form, the way Thom would give really smart young people even more than they could handle and see if they rose to the occasion," says Enright, remembering his time as a young Morphosis associate. From a bricks-and-mortar standpoint, there usually wasn't a whole lot at stake. "He kept rewarding me with the biggest projects—the ones that would never get built." In 1999, more than a quarter-century after Morphosis opened its doors, Enright found himself the project architect for an impossible building that had somehow seen its way toward fruition. Sinuous and fragmentary, Diamond Ranch High School near Pomona was a monument of defiance to a public education system beholden to uniform instruction and standardized testing.

While Morphosis's body of finished work remained relatively modest until the turn of the millennium, "modest" has never been an adjective attached to Mayne himself. "There's a huge misunderstanding or abuse of the word 'ego' in architecture," he says, "which is really disgusting. There's a group of people who will challenge you as egotistical, and I'm like, 'How could you possibly be an architect, starting with your earliest conversations, and you're not even going to get there until you're 50, without having an immense ego?' It's absurd."

"Ego," Mayne continues. "What is ego? There has to be some kind of strength or confidence or blindness. Otherwise you don't care, you don't keep waking up and going to work, and keep working your ass off until midnight, seven days a week, for fucking 30 years."

WHILE HE NEVER INVESTED a dime of his own money on a Morphosis project, Edward Feiner will almost certainly be regarded as the pivotal patron of Mayne's career. As chief architect of the U.S. General Services Administration (GSA) from 1995 to 2005, Feiner, FAIA, headed up the agency's Design Excellence Program, which for the first time engaged architects who had accomplished far more in the way of innovation than in square footage. The three massive Morphosis projects developed during Feiner's GSA tenure are perhaps the three most counterintuitive landmarks ever green-lit by the federal government. At least in their early stages, they all caused some friction.

Not long after Mayne won the commission for the Wayne L. Morse United States Courthouse in Eugene, Ore., in 1999, Feiner was paged at Portland International Airport. It was Michael Hogan, then head of the U.S. District Court that would be occupying the building. Feiner remembers the judge upset by more than just Mayne's radical design: "He asked me, 'How do I get this overturned? I will not have my courthouse designed by someone like that—liberal.'" After failing to oust Mayne, Hogan was surprised to find himself bonding with the bad boy liberal architect over their shared passion for fine wine. Seeking inspiration, the two of them traveled

to Paris together to see the government buildings constructed during the era of French President François Mitterand. Until about five years ago, Alison-Mayne recalls her husband wearing black shirts and slacks—the standard uniform for an American design visionary. Under Hogan's influence, he began favoring bespoke suits and Gucci footwear.

Scientists at the National Oceanic and Atmospheric Administration (NOAA) initially bristled at Mayne's design for the agency's Satellite Operations Facility, which opened in 2006. With its sunken labs covered in greenery, and its many antennae bunched into a loose interpretation of a submarine's conning tower, the building was anything but the familiar technology box. One concerned citizen called Feiner to complain that she could find no trace of San Francisco in the Morphosis-conceived 2008 U.S. San Francisco Federal Building, whose slim, slightly bowed metallic face resembles a gigantic chunk of some cosmic Berlin Wall. Feiner explained to her that the four windows that pucker its frontage were in fact bay windows paying homage to the city's Victorian architecture. Actually, what Mayne's ecologically sustainable 21st-century postmodern government building has most in common with a 19th-century San Francisco mansion is a total absence of air-conditioning in design and construction—to the continuing dismay of many of the employees currently working there.

"The reason I think that Thom's public projects are really so remarkable is that he excited my imagination as a client," Feiner says. "Working with him I found out that the best client is one who's interested—not in having an architect find solutions to a problem, because that can usually be done, but in having the architect identify the opportunity and the promise of what a project can be, and open that horizon and those possibilities that are beyond the client's imagination. I may not have agreed with all of Thom's ideas, but I was truly stimulated by the discourse."

Arrested career development suits some architects better than others (consider Frank Gehry's dourness). Mayne may be pushing 70, but he presents himself as guileless, as enthusiastic, and as unencumbered by social niceties as a child. "Thom wakes up every morning like a chipmunk," his wife, Alison-Mayne, says. "Ready to go." Friends from Mayne's generation who went into medicine or business began talking retirement as they neared age 55. "Literally, when I'm with those guys," Mayne says, "they're going, 'Oh, I'm getting close. I'm going to get a boat and go around the world for five years and I'm done.'"

"It's hilarious," Mayne continues. "In my 30s, I wasn't even quite a baby yet. When I was 55, now I'm a little kid."

Eric Owen Moss doesn't believe that the architectural establishment's belated embrace of Mayne has much to do with repositioning—at least on Mayne's part. "Thom could make the argument that, 'I didn't change—they changed,'" Moss says. "In his case, the center came to the edge, which is where he was. And if the center moves to the edge, that gives more venues, more voice, and more opportunity for the guys on the edge."

The architect who for much of his career had next to no work at all adheres to a work schedule as frenetic as he is. He commutes back and forth from Morphosis's recently opened Manhattan outpost and its headquarters in Culver City. He's a tenured faculty member of UCLA's Department of Architecture and Urban Design, and serves as a member of SCI-Arc's board of trustees. He's currently designing the Hanking Center Tower in Shenzhen, China, the Milanese headquarters of the Eni oil and gas company, and an information and computer sciences building at Cornell University.

At Morphosis's Culver City office, there's a lily-white model of the Eiffel Tower under glass, and right next to it, the Phare Tower, a sculptural spire of an office building 70 meters high slated for La Defence, Paris's far west business district. The Phare Tower was originally due for completion last year, but the project has stalled. According to Alison-Mayne, the top corporate executives who are among the building's likely tenants are the same ones who, following actor Gerard Depardieu, have been fleeing France to avoid French president François Hollande's 75 percent tax rate.

As a dominant designer of postmodern landmarks, Mayne has been facing unintended consequences he rarely had to deal with as a theorist. Employees of the San Francisco federal building haven't just been grumbling about the air quality; they've also bristled at the elevator system that only stops on every third floor, and a cafeteria situated in an outdoor plaza—elements Mayne conceived to ensure compulsory exercise on the job. According to the Morphosis website, 41 Cooper Square "aspires to manifest the character, culture, and vibrancy of both the 150-year-old institution and of the city in which it was founded." Nevertheless, the building itself may have actually helped alter Cooper Union's character and culture forever. Until May of this year, all students there were accorded full scholarships. Borrowing the $166 million cost of Mayne's vision against the land it owns beneath the Chrysler Building, Cooper Union sunk itself deeper into the financial abyss that has forced the institution to charge tuition for the first time in its history, despite student protests.

And then there are the critics—the *Los Angeles Times*' Christopher Hawthorne the most damning among them. "It is a thoroughly cynical piece of work," Hawthorne wrote earlier this year in his review of the Perot Museum. "A building that uses a frenzy of architectural forms to endorse the idea that architecture, in the end, is mere decoration."

Mayne will tell you that attacks like these are not particularly bothersome. After all, it wasn't so long ago when he could delight in storming the battlements of establishment architecture from the far margins. Now, having reached the profession's pinnacle, it's only fitting that he should find himself under siege. "I've been a huge thrower of hand grenades, and now I'm the receiver," says Mayne, smiling. "Which is quite lovely."

WE TWO

TOD WILLIAMS AND BILLIE TSIEN HAVE BUILT THEIR PRACTICE NOT ON A SIGNATURE STYLE, BUT ON SIGNATURE VALUES.

ARCHITECTURE FIRM AWARD

Text by **Karrie Jacobs**
Portraits by **Ian Allen**

AS SAM FARBER, a former American Folk Art Museum trustee, tells it, there were three firms in the running in the late 1990s for the commission to design the institution's town-house-scaled home on West 53rd Street. "The other two firms came to the interview with models. Tod and Billie came and said, 'We really can't give you a model, because we really don't know what we're going to do.'" They told the museum's building committee, headed by Farber, that they needed to talk with everyone involved—collectors, curators, staff—before they could even begin the design process. "I thought, 'That's marvelous,'" Farber recalls. Tod Williams Billie Tsien Architects (TWBTA), of course, got the job, and built a little museum that opened to much acclaim just three months after Sept. 11. *The New York Times* critic Herbert Muschamp declared: "The Rebuilding of New York has already begun."

The method Farber describes—starting without preconceived notions, demonstrating a willingness to listen, and developing a design based on a deep understanding of what is truly desired—applies to all of the firm's work. "I think we have signature values," Tod Williams, FAIA, says. "But not a signature style." When Williams and Tsien's clients describe the buildings in which they work or live, they don't just talk about the beauty of the views or the materials—although those qualities come up—but they credit the architecture with having an uncanny effect on the lives within.

For instance, Dr. Einar Gall of the 1995 Neurosciences Institute in La Jolla, Calif., says that the design of the buildings so effectively promoted socializing among researchers that "we believe that these interactions led to several important discoveries that would not have been made in their absence." And Alan Silverman, who with his wife, Gretchen Freeman, owns the 1996 Desert House in Phoenix, says that it "helped our children to develop a sense of daily, intimate interaction with the desert."

Most of TWBTA's buildings are like the Folk Art Museum. They are small, but so sure of themselves that it would be inaccurate to call them modest. They are confident buildings, but not boastful ones. They have a way of insinuating themselves into the landscape, behaving as if they've always been there. Every material has been chosen with great thought; each texture an expression of some intrinsic value. To enter a TWBTA building is not simply to experience the results of the architects' skill at listening to their clients, but to be privy to a conversation that Williams and Tsien have been having with one another for over three decades.

THE NEUROSCIENCES INSTITUTE

La Jolla, Calif., 1995

The idea of "taking a program for what might be a singular building and splitting it," observes Billie Tsien, AIA, is a theme that "reappears in our work." The Neurosciences Institute (today controlled by the Scripps Research Institute) is a case in point—a cluster of three buildings, largely buried in the landscape, with a plaza at the center. "We're not interested in making a building that is an object," Tsien continues. "By making separate buildings, it becomes more of a place than a thing." Conceived of by researchers who desired a "scientific monastery" dedicated to a deeper understanding of the brain and consciousness, it is cherished by those who work there for the variety of views of both architectural detail and the natural environment. The architecture, according to research director W. Einar Gall, fostered discovery by promoting social interaction between scientists. For instance, a sleep researcher and an insect behavior specialist crossed paths at the institute, and through their collaboration demonstrated "for the first time that insects actually sleep."

MICHAEL MORAN

DESERT HOUSE

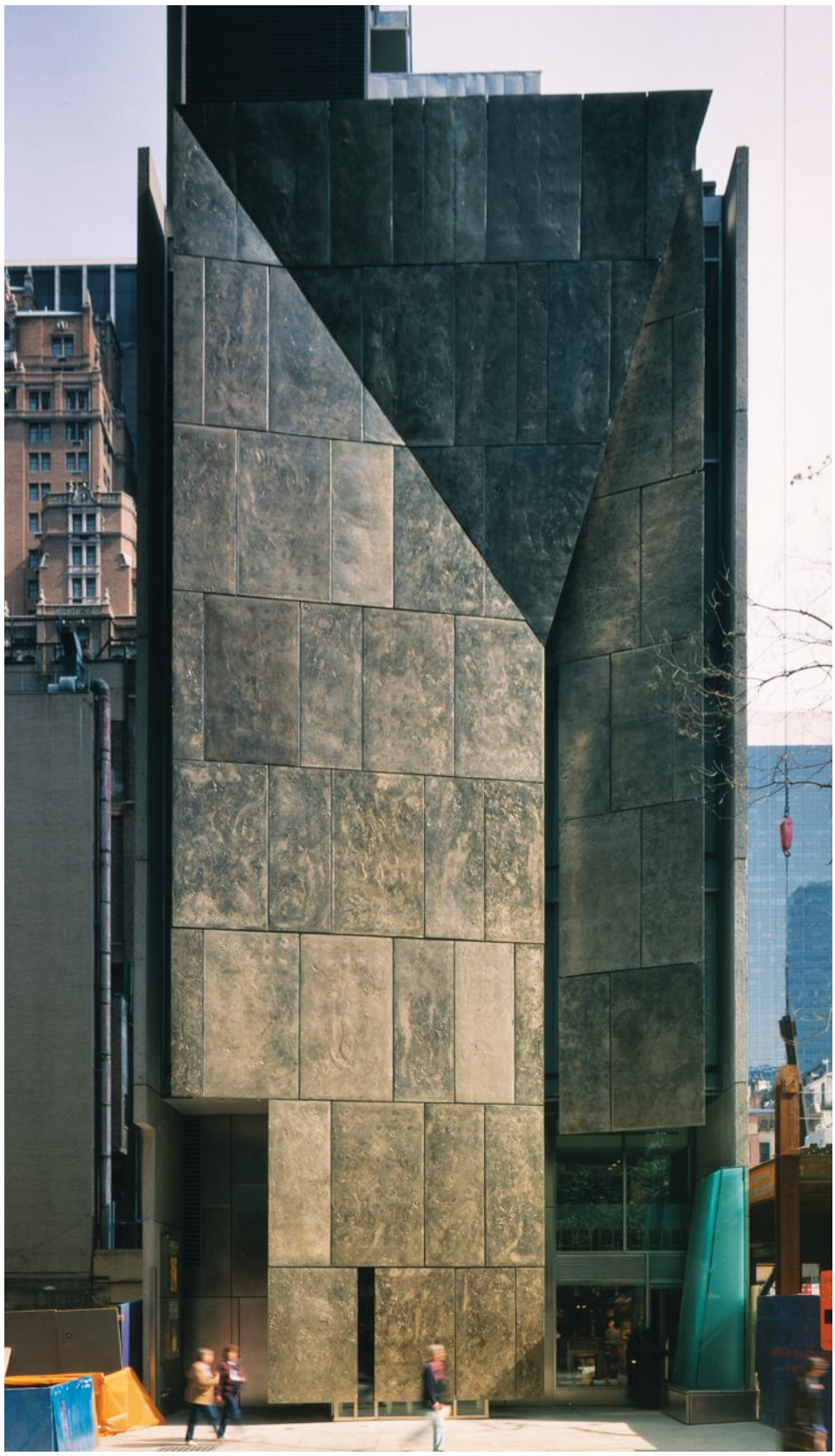
Phoenix, Ariz., 1996

The Silverman-Freeman house is, in a way, a prototype for many of the TWBTA projects that followed. "That house was trying to be quiet, and of the desert, and simple," Tsien says. It is broken into components: In this case, two simple rectangular buildings that sit on either side of a desert wash that attracts greenery and animal life. The two wings are connected by bridges, one enclosed and one open. "I really like standing in the house's indoor bridge," says homeowner Gretchen Freeman, "and looking out over the wash. The view provides the sensation of being right in the middle of the desert, away from the city." The home serves as a template for the firm's approach to surfaces, a whole palette of textures and effects conjured from one basic material: concrete. The house is built of insulated concrete block walls, sandblasted or polished, and concrete floors that have been ground into terrazzo. "I love the way Tod and Billie used common materials to create a special, uncommon home," says Freeman's husband, Alan Silverman.

CRANBROOK NATATORIUM

Bloomfield Hills, Mich., 1999

"They managed to transform the experience of swimming indoors," says Reed Kroloff, a former competitive swimmer and the director of the Cranbrook Academy of Art and Art Museum, and imbue it "with all of the wonder and freshness of swimming outdoors." Explains Williams: "When you swim in a pool, you use air conditioning to dehumidify. Here we used natural ventilation. The walls and ceiling open. When they do, there's always a fan that's blowing, and the breezes come through, so you smell the pine forest instead of chlorine." But the magic of the place is not just in the ventilation system. It's about how the random patterns of lights in the deep blue ceiling mimic the effect of swimming under a nighttime sky. It's about how a combination of windows that meet the pool deck and a hilly site make swimmers feel "as if you're swimming through the trees," Kroloff says. In the roof are two 30-foot-wide occuli, which the natatorium staff will sometimes open during a snowstorm. "Snow comes through like a column," says Kroloff, and then melts before hitting the water.



MICHEAL MORAN/OTTO

AMERICAN FOLK ART MUSEUM

New York, 2001

"They thought it would be *fait accompli*, no big deal," says Tsien, speculating about what the Museum of Modern Art (MoMA) officials were thinking when they recently announced their intention to demolish the Folk Art Museum. "I think MoMA has been totally shocked by the fact that there's opposition." (For more on MoMA's response to the criticism, see page 66.) The tiny eight-story museum, squeezed onto a footprint just 40 by 100 feet, is notable not just for its opaque, sculpted façade, but for the staircase that wends through the upper floors, doubling as a gallery, with artworks displayed along the way. In fact, this feature pays homage to the museum's potential destroyer. Williams explains: "One of the things we always loved about the old MoMA: You remember walking up the stairs and getting to that Oskar Schlemmer painting?" He means the one that shows people climbing the Bauhaus staircase. "That was a touchstone." Williams and Tsien also recall how they brought the whole construction crew to the Cooper Hewitt's Triennial to immerse them in the values of design. It was their way of telling the workers, in Williams's words, "This is not just any piece of work. We want you to give your best, because it's something you'll leave behind."

DAVID RUBENSTEIN ATRIUM

New York, 2009

"What I'm genuinely surprised by is, whenever I enter the space, how serene it is even when it's packed," says Lincoln Center president Reynold Levy about the David Rubenstein Atrium, a privately owned public space directly across Columbus Avenue from Lincoln Center's famous plaza. According to Levy, one of the reasons Williams and Tsien were chosen for the project was that "they were passionate about what they could do with the space. They understood that it needed to serve as a kind of Lincoln Center commons." When the architects talk about the odd space, wedged in between two buildings, in which they designed the 9,600-square-foot annex, it's with great conviction. Tsien says that they wanted to make the atrium feel "like a garden or a refuge." She cites the large green walls, the water feature, the 97-foot-long felt mural by Dutch artist Claudy Jongstra—and the well-maintained public restrooms. "We wanted this to be a place where people who are homeless could be sitting next to someone who was having a glass of prosecco before they go to the opera. All people would be welcome into a place that felt calm, controlled, and beautiful."

CENTER FOR THE ADVANCEMENT OF PUBLIC ACTION

Bennington College, Vt., 2011

The center, says Bennington president Elizabeth Coleman, is intended to "foster a lively give-and-take about how to move the needle on complex public issues." Like many TWBTA projects, this is a suite of buildings: a symposium space, a small residence hall, and a multipurpose facility called the Lens. From a distance, the complex appears to exude that lovely white-washed glow so common in Vermont. The buildings, with geothermic heating and cooling, are clad in marble reclaimed from six defunct local quarries. According to one of its resident fellows, Gong Szeto, a noted interaction designer, the center was intended to look and feel like a "'secular church,' a place where people gather ... to contemplate the deeper meanings and relationships between an individual, her polity, and the complexities of the society within which she lives." Adds Tsien: "There's a sense of gathering together in an almost Quaker way."

REVA AND DAVID LOGAN CENTER FOR THE ARTS

University of Chicago, Ill., 2012

This arts center features a 172-foot-tall tower clad in long bars of golden limestone, which affords expansive views across Midway Plaisance, an Olmsted-designed green. The rest of the complex is housed in a low, industrial-style remake topped by successive ridges of skylights. "Tod and Billie were chosen because of their vision to create a beacon for the arts with their dramatic tower," says Logan's executive director, Bill Michel. "It was so complex to actually build a tower of the arts and make it really work," Williams says, "that about two or three years into it we just said, 'Mea culpa, we cannot do this. You have to get rid of this tower.'" The recession, of all things, rescued the project. "The economy tanked just at the right moment, and we made it on budget because suddenly contractors were desperate for work."

OPPOSITE: NIC LEHOUX; THIS PAGE TOP: MICHAEL MORAN; BOTTOM: TOM ROSSITER

THE LADY & THE PIANO

THE ASTONISHING ARCHITECTURE OF THE MENIL COLLECTION IS A MONUMENT TO DOMINIQUE DE MENIL, ONE OF THE GREAT DESIGN PATRONS OF THE 20TH CENTURY.

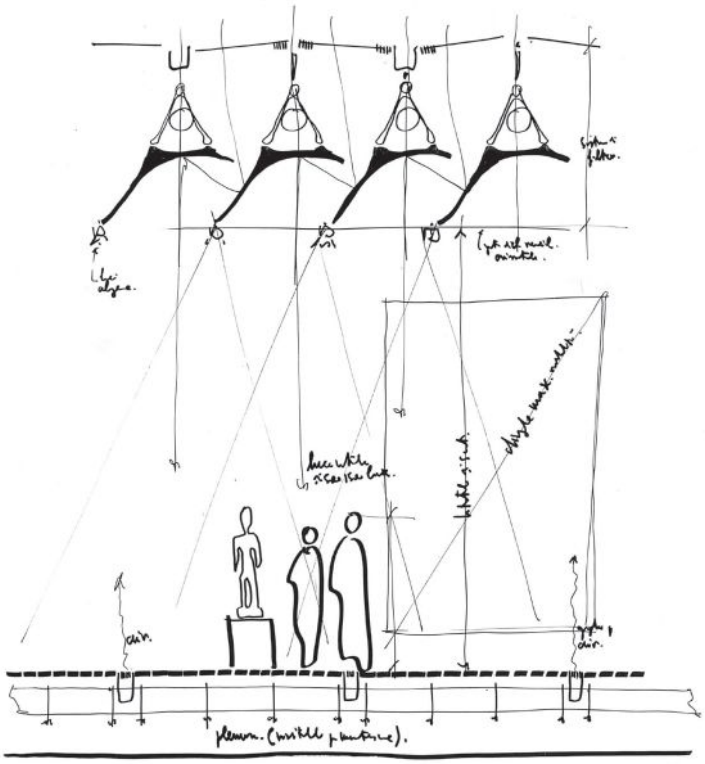
TWENTY-FIVE YEAR AWARD

Text by **Reed Karaim**
Images courtesy **Menil Collection**

IN 1948, JOHN AND DOMINIQUE DE MENIL decided to build a house. They lived in Houston, then as now a booming oil town, so the idea was hardly an unusual one. John was the president of Schlumberger, an oilfield services company, and the de Menils purchased a lot in River Oaks, the kind of stately neighborhood where you would expect a wealthy oil man to build. Half a century later, Jeffrey Skilling, one of Enron's self-proclaimed geniuses, would own a mammoth mansion directly across the street before the Feds relocated him to a more modest residence at the Englewood correctional facility. The de Menils' decision and the address were all as Houston society of the time would expect. The house would prove to be something else. But then, so would the de Menils.

They first arrived in town in 1941, wartime refugees of a kind, but instead of carrying battered canvas luggage, they brought an oil company. Schlumberger was the family business. Dominique had been born Dominique Isaline Zelia Henriette Clarisse Schlumberger, in Paris in 1908. "John," who was actually Jean Marie Joseph Menu de Menil, the son of the Baron Georges Auguste, also had been born in Paris, four years earlier than his wife. They'd met at a party in Versailles, married in Saint Dominique-Saint Matthieu Chapel in Paris, and honeymooned in Morocco.

As a young couple, they lived in a spacious apartment in Paris, and it's interesting to ponder the life they might have lived had the war not intervened. But Schlumberger decided the Nazi invasion was a good time to relocate. John's family had a military heritage dating back to Napoleon, and before leaving France, he had been part of the resistance, sabotaging oil trains among other things. So the de Menils came to America.



The Menil Collection, designed by Renzo Piano, has a series of curved baffles integrated with skylights (see Piano's original drawings bottom left) that fill the galleries of modern art with natural daylight.

Renzo Piano and Dominique de Menil at the opening day ceremony for the Menil Collection in 1987.

Somewhere along the way, John and Dominique fell madly in love with Modernism in all its forms—architecture, painting, and sculpture. The house that they built brought that aesthetic to Houston in its high midcentury form, and the city was never quite the same.

The de Menils hired Philip Johnson, FAIA, then up and coming, for the project, in part because a friend told them that they could get him for $25,000 cheaper than Ludwig Mies van der Rohe. John de Menil and Johnson quickly hit it off. "They were both men on the make," says Stephen Fox, an architectural historian at Rice University in Houston. Dominique was not so taken. In a single-spaced letter to Johnson, she complained, among other things, about how his casement windows banged in the wind.

Banging windows aside, the house Johnson built the de Menils was an iconic expression of Modernism: long, low, and nearly windowless from the street. Inside, visitors are immediately surprised by a series of glass walls that open into an interior courtyard, and that create a sense of opacity and light that has lost none of its power today.

The house befuddled Houston in more ways than one. Cabbies thought they were delivering passengers to a dentist's office or clinic. Deliverymen mistook the front door for the service entrance. But it was among the city's social elite that the house had the biggest effect. "There were other modernist houses, but they were struck by the audacity of this one," Fox says. "It really served as a symbol to old Houston society of what they could do."

And so the de Menils began a life of cultural and architectural patronage that continues to shape the city today, and that stands as an argument for the power of great architecture and art to reach through the years. "What's interesting is that they really didn't build that many buildings," Fox says. "But they inspired so many people."

IN 1954, THE DE MENILS commissioned Johnson to design a master plan for St. Thomas, a small Catholic university in Houston that they had decided to support. The school's central quadrangle of two-story brick and glass buildings is another example of modernist simplicity and functional grace. When the Basilian fathers running St. Thomas resisted some of the de Menils' ambitious plans (particularly John's plan to make St. Thomas less Catholic), the family transferred their patronage to Rice University, where they became active supporters of architecture and the art department.

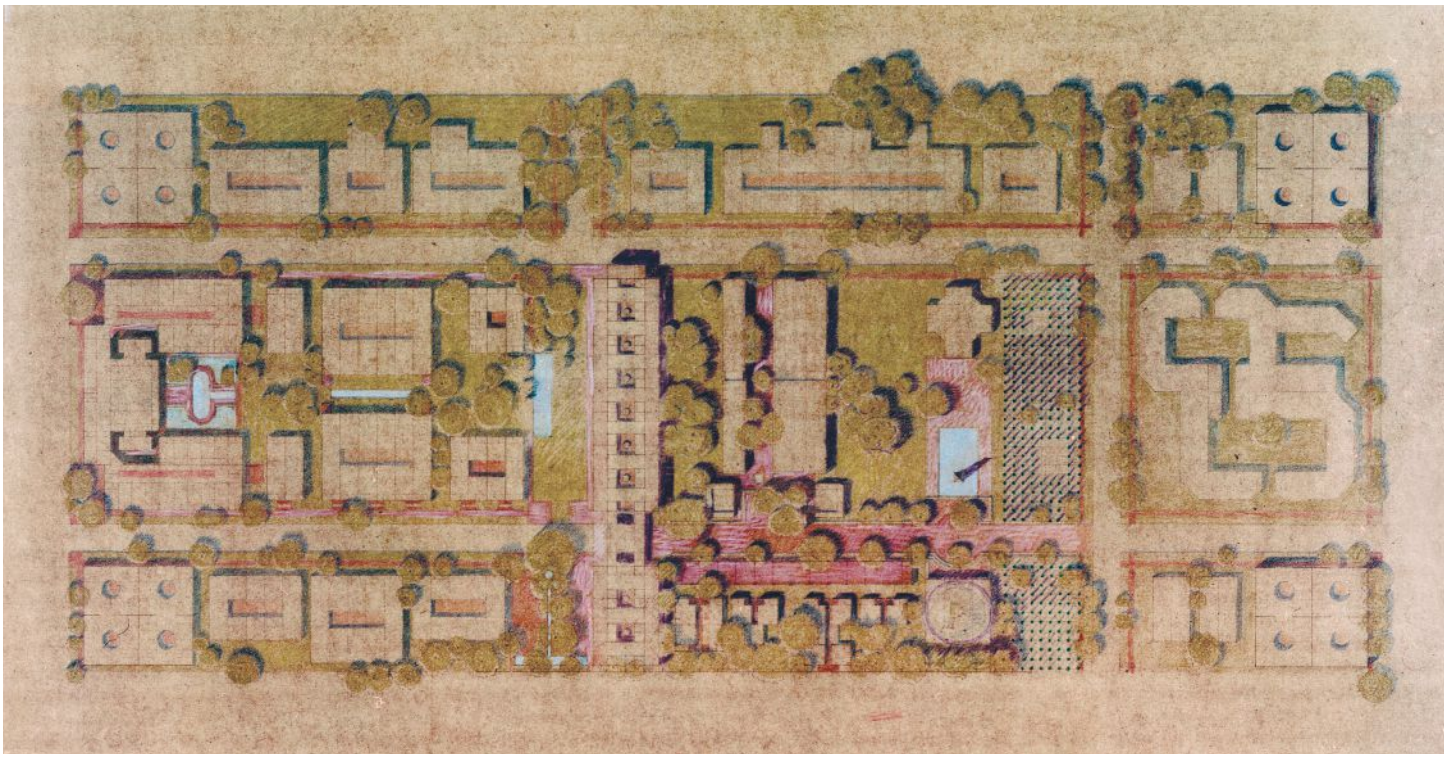
It wasn't the last time that they pushed a little too hard, at least for some tastes. "People liked what they did and also didn't like their strength," says Helen Winkler Fosdick, who first met the de Menils as an art history student at St. Thomas, and was part of a coterie of idealistic young people who ended up working for them. "There were people in Houston who thought it was either the de Menil way or no way."

In the 1930s, they had begun collecting art. One of their first pieces was a small Cezanne; another was by the surrealist Max Ernst, even though Dominique admitted that when a friend initially showed them a painting of birds by Ernst, they were far from impressed. "We told our friend, please explain to Max Ernst that we liked birds that looked like birds."

Nonetheless, trying to support a young artist that a friend believed in, the de Menils commissioned a portrait of Dominique from Ernst. When it arrived, they discovered that they cared for it no more than his birds, and they packed it away to be largely forgotten during the war years.

Today, that painting is one of several Ernsts on display in the Menil Collection, which is housed in a Houston museum designed by Renzo Piano, Hon. FAIA. The de Menils' art collection would eventually grow to more than 10,000 pieces, including works by the leading artists of abstract expressionism, surrealism, and pop art. After the war, when they found the parcel containing the Ernst portrait of Dominique, they discovered that their tastes had changed. "By this time, our eyes were opened. Our eyes were different," Dominique told an audience at an art show she curated in the 1970s. "We hadn't seen something, and now we could see it."

Clockwise, from top left: John and Dominque de Menil, who emigrated from Paris to Houston in 1941; the de Menils with the painter Max Ernst; Dominique oversees workers as they hang a painting by Barnett Newman in the Menil Collection museum; Dominique at a rodeo in Simonton, Texas, with René Magritte; and John with Andy Warhol at the 1967 Montreal Expo.



Clockwise from top: An unbuilt master plan (c. 1970) for Rice University by Louis Kahn, who the de Menils helped recruit for the project; Barnett Newman's Broken Obelisk sculpture, dedicated to Martin Luther King Jr., greets visitors at the Rothko Chapel; the interior courtyard of the de Menils' house, which was designed by Philip Johnson.

BOTTOM LEFT: HESTER + HARDAWAY PHOTOGRAPHERS; BOTTOM RIGHT: PHOTO BY HICKEY-ROBERTSON. ROTHKO CHAPEL, HOUSTON, BROKEN OBELISK BY BARNETT NEWMAN, FOREGROUND

A collection that began with a Cezanne and a disdain for Ernst would end up including everything from African tribal masks to Warhol silkscreens. Josef Helfenstein, the current director of the Menil Collection, believes it was a way of carrying one of their passions with them into a new life. "When they came to Houston, it was really a very young city. There wasn't a lot of culture," Helfenstein says. "Building a museum, sort of in their own heads, was a way of dealing with where they had landed."

That could lead to the impression that they dismissed Houston, but François de Menil, their youngest son and a noted architect himself, says his father, in particular, found it a congenial home. "My father loved the Texas spirit—the can-do, will-do Texas spirit," François says.

Still, an awkward contrast in styles was sometimes apparent. A film made by François of the Max Ernst show captures a reserved and still quite continental Dominique and a wide-eyed, blinking Ernst dealing with a parade of old-school Houstonians, by turns kind, overly effusive, and mildly challenging. The highlight comes when a patrician woman with a honeyed Southern accent tells a baffled Ernst that after seeing a painting by him of an owl, she had been fascinated to meet him "and find out what kind of bird you are."

Ernst was one of many artists, architects, and writers who visited the de Menils in Houston. Le Corbusier, Warhol, and Norman Mailer all swung by. Magritte appears in photos proudly wearing a cowboy hat after a visit to the rodeo. François recalls as a child thinking these guests were simply his parents' friends. "But looking back I can see the house became a salon of sorts—not because they were trying to operate a salon, but because they were bringing the culture they were familiar with in Europe to Texas."

The de Menils were a partnership of equals, but John is remembered as the more outspoken one. "John de Menil used to say it was not worth doing unless you did it the absolutely best way it could be done," says Winkler Fosdick. Stephen Fox offers a more colorful take on their differences. "John was the kind of guy who would jump up on a table and point at people and tell them, 'You're not good enough.' Dominique would go around the table and pat them on the back and say, 'No, no, you're good enough.'"

There is little doubt that they had the attention of Houston's cultural elite. At the same time they were commissioning Philip Johnson's design for St. Thomas, the Houston Museum of Fine Arts hired Mies van der Rohe to design the first of two additions that he would eventually develop for the museum. "It was seeing what the de Menils had accomplished that gave them the confidence to go out and hire Mies van der Rohe," Fox says.

Philip Johnson would end up designing many other buildings in Houston, but the real testament to the de Menils is probably in the local architectural scene that has flourished since. Howard Barnstone and his partner Eugene Aubry, FAIA, who assumed responsibility for the de Menils' house after Johnson grew dismayed at Dominique's hiring of the too-colorful-for-Johnson interior decorator and fashion designer Charles James, carried the mantle of Modernism forward in the city. It lives today in the work of several Houston firms, including Stern and Bucek, who handled an immaculate restoration of the de Menil house, completed in 2004.

THE COMMISSION TO DESIGN the Menil Collection captures an essential part of the de Menils' relationship with the city. After John passed away in 1973 (this son of the French aristocracy carried to the church in a battered Volkswagen van that had been used to transport his beloved art), it fell to Dominique to decide the future of the family collection. The Louvre and the Museum of Modern Art in New York were both interested, but after lengthy deliberation she decided the collection needed its own museum.

If Dominique had sometimes been at odds with Johnson, she found her temperamental match in Piano. "His focus on details resonated with her," Fox says. "They were both logical, calm people." Returning in 2007 for the museum's 20th anniversary, a decade after Dominique had passed away, Piano remembered the intensity of their collaboration, calling her the most stubborn woman he had ever met, but also a careful listener. "You do not have good architecture without a good client. And architecture is, in some ways, a mirror of the client," Piano said. "So this building is a portrait of Dominique de Menil."

Dominique told him she wanted a museum largely lit with natural light, allowing the mood to change with the passage of the day—but without damaging the art, of course. Piano's solution: a series of curved baffles integrated with the skylights to diffuse the harsh Texas sun, while still allowing a sense of the day to come through. "The way Piano resolves the daylight was kind of stunning," Helfenstein says. "This is where he became kind of this magician of light."

The building has been recognized as an early Piano masterpiece, but one of the things little noted is that it sits in the middle of a residential neighborhood, and with its wrap-around portico, it quietly echoes the bungalows on neighboring blocks. Along with its broad green lawn that functions as an informal park, the museum clearly welcomes the neighborhood in, a reflection of the way the de Menils viewed architecture and art. "They always saw the end goal as a public good, which I find beautiful," Helfenstein says.

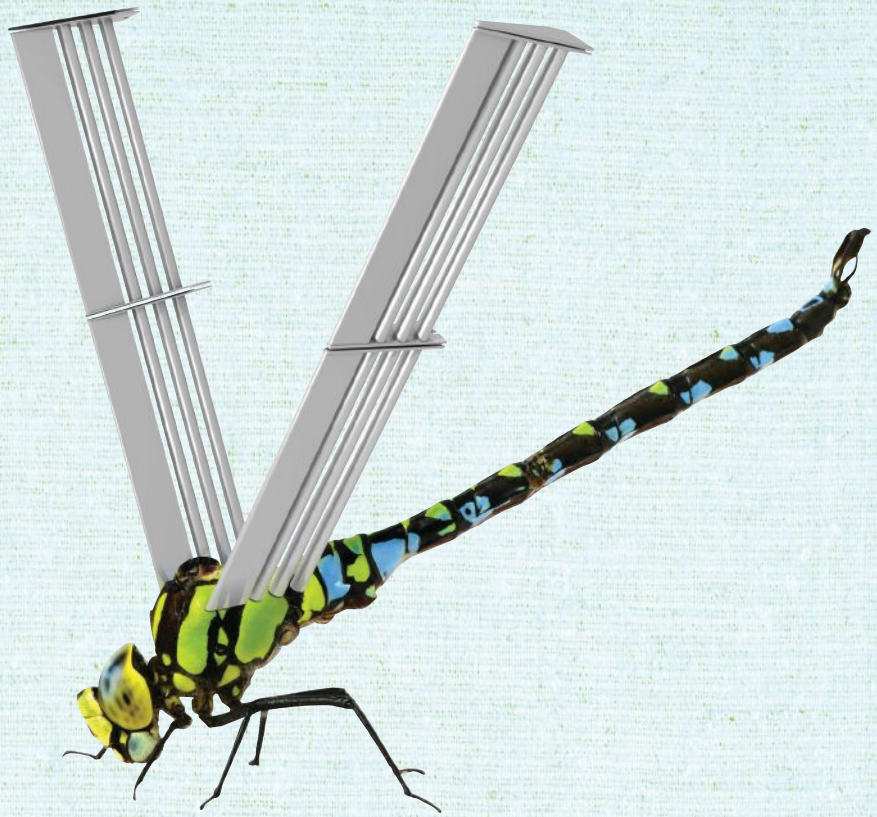
Piano enjoyed his work at the Menil enough that he later returned in the mid-1990s to design a smaller freestanding gallery dedicated to the work of artist Cy Twombly. Once again Piano would find an innovative way to work with natural light, this time with fabric and mechanical louvers, creating a building that shares an affinity with the Menil next door, but is its own unique creation.

One of the de Menils' only other commissions also captures something essential about their relationship to the city: The Rothko Chapel, just down the street from the Menil, was unveiled in 1971 to house 14 large paintings by Mark Rothko. Philip Johnson, Howard Barnstone, and Eugene Aubry all made contributions to the project. The site also includes a reflecting pool with a sculpture, Broken Obelisk by Barnett Newman, at its center. The main room of the chapel is a sparse, octagonal space with simple benches for contemplation of the massive, black-hued paintings that fill the walls. It's as severe an expression of high art as you're likely to find, but with the sculpture, the chapel site also illustrates how the de Menils were committed social activists. They contributed to and helped organize programs in Houston's black community, including one of the city's first serious exhibitions of African art that was held at the De Luxe Theater.

The de Menils had originally offered the Barnett Newman sculpture to the city of Houston, but they wanted it dedicated to Martin Luther King Jr. It was less than a year after King's assassination, and racial tension still ran high, especially in the South. A nervous city council rejected the gift, but the de Menils were undeterred. They put the obelisk with its dedication in its current site, an expression of how they saw art as an essential commentary on the human condition. Winkler Fosdick remembers John loved the piece so much that he would often have the driver divert the car when they were coming home at night, just so they could drive past it.

The Rothko Chapel receives thousands of visitors a year, but it also has become a more formal ecumenical gathering place. In 1991, on the chapel's 20th anniversary, a ceremony was held to present a special award to Nelson Mandela from the Carter-Menil Human Rights Foundation, founded in 1986 with former President Jimmy Carter. A large tent was erected for the crowd that gathered to see the luminaries, which included Bishop Desmond Tutu. After the ceremony in the chapel, Carter and Tutu entered the tent to meet the public. As they did so, Winkler Fosdick remembers Dominique de Menil trying to slip across the stage behind them.

The de Menils' long relationship with Houston hadn't always been easy, but now recognition of all they'd done seemed to fill the audience. Applause swelled throughout the tent. Carter and Tutu stood aside and raised their hands to acknowledge the woman responsible. "That was the first really strong indication of how she'd really won over this town," Winkler Fosdick says. "The crowd went crazy. They just went crazy for her."



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AIA HONOR AWARDS

ARCHITECTURE

ARCHITECTURE

LEE HALL EXPANSION

Clemson, S.C.
Thomas Phifer and Partners, New York

This energy-efficient, 55,000-square-foot addition to Clemson University's College of Architecture, Arts, and Humanities engenders a sense of connectivity with the natural world. The eastern edge of the building mirrors the natural wooded ridge created by the rolling foothills of the Blue Ridge Mountains. Operable motorized windows open fully when outside temperatures allow the mechanical systems to be turned off. Inside, glazing between spaces creates a transparent environment meant to foster cross-pollination between academic disciplines, faculty, and students.

Jury: "It is an exceptional work that surrounds students with a seamless integration of programmatic goals, energy efficiency, and creative tectonics."

Client: "I most appreciate how this building is supporting the creation of a more collaborative, public, and innovative design education culture. It's getting more difficult to tell the architecture students from the art students from the landscape architecture students, and that is a great thing."
—Kate Schwennsen, FAIA, professor and chair, Clemson's School of Architecture

TOP: MICHAEL MORAN/OTTO; BOTTOM: SCOTT FRANCES/OTTO

AIA HONOR AWARDS

ARCHITECTURE

CENTRA METROPARK

Iselin, N.J.
Kohn Pedersen Fox, New York

This LEED Platinum project reimagines the suburban New Jersey office park with a visually arresting design. Tasked with renovating an 110,000-square-foot, 1980s office building, the architects used a state-of-the-art curtainwall and an asymmetrical tree-column and truss support to extend the fourth floor. A lightwell carved into this floor floods the interior with natural light. Large pyramid-shaped landscape forms dot the exterior, signaling to passing cars that this space is new and different.

Jury: "The impact that this building has on the parkway has resulted in improvements of neighboring structures, proving that design can have a ripple effect in an otherwise mundane context."

Client: "To differentiate, to be compelling, and to be memorable: Three statements that drive our development decisions at Hampshire Real Estate Companies. Kohn Pedersen Fox delivered on all of them with Centra Metropark. Nowhere in New Jersey has there been such a dynamic transformation executed in the commercial office environment that has received universal accolades from all constituencies."
—Todd Anderson, executive vice president and principal, Hampshire Real Estate Companies

AIA HONOR AWARDS

ARCHITECTURE

MASON LANE FARM

Goshen, Ky.
De Leon & Primmer Architecture Workshop, Louisville, Ky.

The client of a 2,000-acre property used for agriculture, recreation, wildlife habitat, and conservation had an inspiring mission for the architects: achieve LEED standards for a rural agricultural project. Simple, regionally inspired building techniques informed the design of two new barns and the placement of a relocated grain silo. The barns, which store hay and grain and service farm equipment, use prefabricated framing elements and local materials, such as Kentucky bamboo.

Jury: "We were taken by how this typology was architecturally rendered with very modest materials that were well crafted and thoughtfully considered throughout."

Client: "Farm buildings traditionally are prefabricated, noninsulated, and very energy wasteful. There was no sustainable standard, and that's what we were seeking. These buildings just came through their fourth winter and they are in beautiful shape. We've had people coming from all over the country to see them." —Eleanor Bingham Miller, owner, Harrods Creek Farm

ARCHITECTURE

MILSTEIN HALL

Ithaca, N.Y.
OMA, Rotterdam, the Netherlands; KHA Architects, Houston

This 47,000-square-foot addition is the first new structure to be built at the College of Architecture, Art, and Planning (AAP) at Cornell University in over a century. The project, which had to respect the historic fabric of neighboring buildings, provides new studios, galleries, critique space, and an auditorium. It successfully forms a new gateway for the northern end of Cornell's campus while creating a unified complex of interconnected indoor and outdoor spaces.

Jury: "The dramatic insertion of the new program in relationship to the existing buildings and site creates exciting new conditions while posing a series of creative opportunities for future uses and artistic additions by the college."

Client: "Milstein Hall functions brilliantly as connective tissue, uniting students and faculty across multiple departments. It promotes a lively dialogue of the present with the past, which is both a quality of the architecture and a quality of our educational mission. And it provides a form of informal exposure between diverse activities that has stimulated new fluid ways of teaching and learning."
—Kent Kleinman, dean, College of Architecture, Art, and Planning

TOP: DE LEON & PRIMMER ARCHITECTURE WORKSHOP; BOTTOM: IWAN BAAN

AIA HONOR AWARDS

ARCHITECTURE

BOAT PAVILION FOR LONG DOCK PARK

Beacon, N.Y.
Architecture Research Office (ARO), New York

When designing a new boat pavilion for Long Dock Park, a 15-acre site on the Hudson River, ARO succeeded in creating a storm-resistant structure (it survived Hurricane Sandy) that is also light on the landscape. Sixty-five solar panels on the corrugated steel roof help offset electrical use from a nearby education center. Secure storage for up to 64 kayaks or canoes, a changing room, and a secondary storage area are enclosed by aluminum-bar grating panels. With its simple wooden deck, the structure reads as elegant, and doesn't interrupt the scenic views of the river and Highlands.

Jury: "This remarkable kayak pavilion ... celebrates simplicity, craft, resilience, and advanced resource-efficiency."

Client: "The architects understood our desire for a structure that would be resilient under high-water conditions: The water simply flows through it. The building is successful as an element in the landscape, and we know it is functionally successful, because this year we had twice as many applicants for kayak and canoe storage. The community loves it!" —Margery D. Groten, senior project manager, Scenic Hudson

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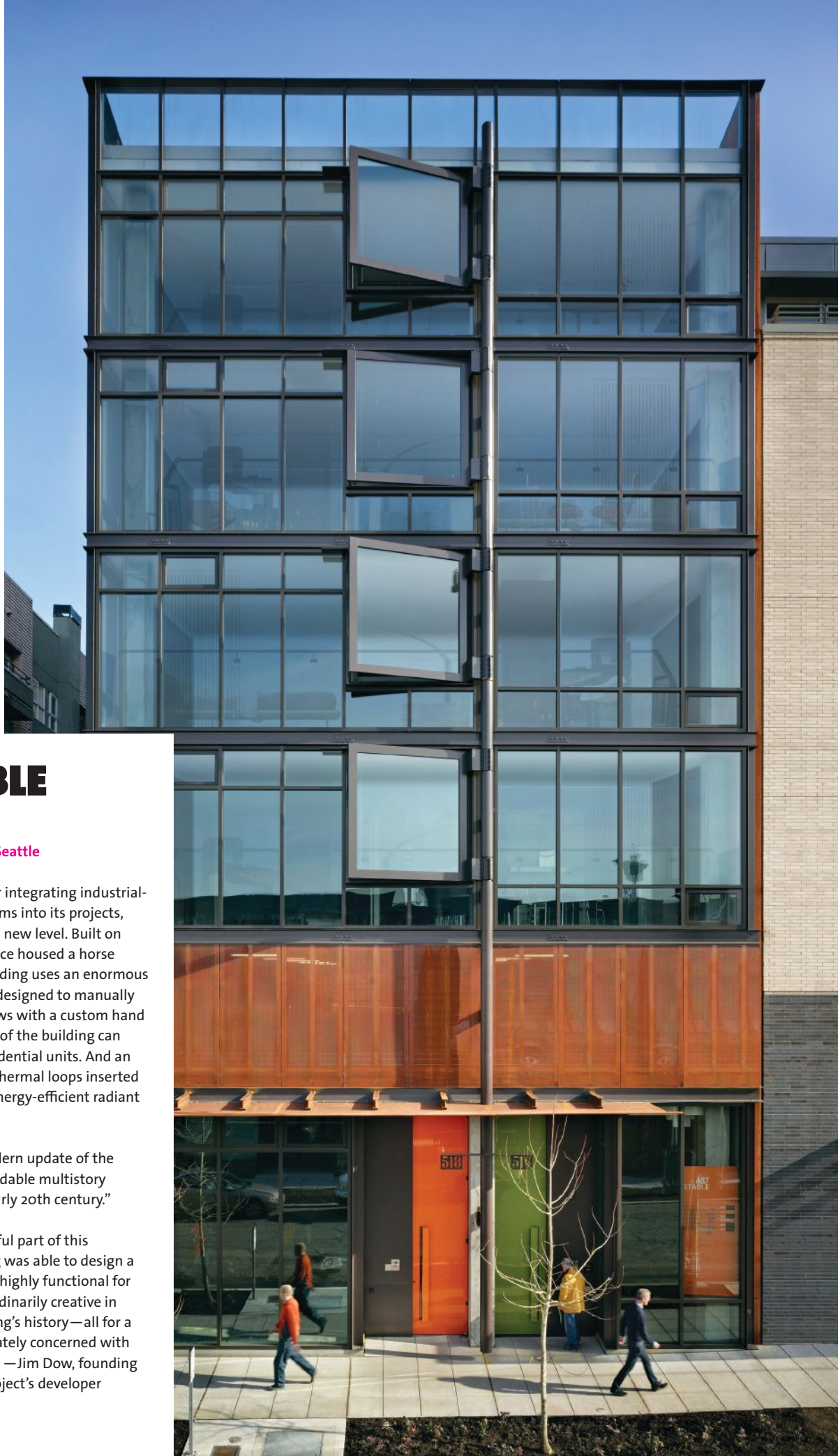

ARCHITECTURE

ART STABLE

Seattle
Olson Kundig Architects, Seattle

Olson Kundig is known for integrating industrial-inspired mechanical systems into its projects, but Art Stable takes it to a new level. Built on an urban infill site that once housed a horse stable, the mixed-use building uses an enormous 80-foot-5-inch-tall hinge designed to manually open steel-framed windows with a custom hand wheel. A crane on the top of the building can lift heavy objects into residential units. And an innovative system of geothermal loops inserted in structural piles offers energy-efficient radiant heating and cooling.

Jury: "The project is a modern update of the proven flexible and dependable multistory warehouse stock of the early 20th century."

Client: "The most successful part of this project is that Tom Kundig was able to design a building that is beautiful, highly functional for its occupants, and extraordinarily creative in its reflection of the building's history—all for a developer who was ultimately concerned with the project's profitability." —Jim Dow, founding partner of Point32, the project's developer

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ARCHITECTURE

MORSE AND EZRA STILES COLLEGES

New Haven, Conn.
KieranTimberlake, Philadelphia

This project required methodical and precise updates to Morse and Ezra Stiles at Yale University, designed by Eero Saarinen and completed in 1962. The library and dining halls were fully renovated, Saarinen's below-grade common rooms were enlarged, and new skylights were added into the original ceiling. A 25,000-square-foot underground addition was designed beneath the existing courtyard. It leads to a newly created sunken courtyard that fills the addition with daylight. The project was the final phase in Yale's renovation of its 12 residential colleges.

Jury: "It is sensitive to the resources and shows real attention to detail—great use of materials, lighting dynamics, and spatial results."

Client: "When those colleges were done in the '60s, they were done in a more austere financial climate, and we had to provide program areas that didn't exist. The architects understood the need for new program areas and were very committed to Saarinen's original design intent." —Mark Francis, major project planner, Yale University

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AIA HONOR AWARDS

ARCHITECTURE

SAINT NICHOLAS EASTERN ORTHODOX CHURCH

Springdale, Ark.
Marlon Blackwell Architect, Fayettevile, Ark.

With this creative restoration, Marlon Blackwell Architect transformed a generic shop building into a sanctuary and fellowship hall for an Eastern Orthodox congregation. Keeping the original structure, roof, and most of the cladding intact, the conversion wasted little and used strategic interventions to yield a bold, spiritual environment. The narthex ceiling descends above a floor of rift-cut oak, and a sky-lit tower marks the entry to the sanctuary. The dome, which is a key feature of the interior, is a surprising reuse of an abandoned satellite dish that was resurfaced with plaster.

Jury: "The project makes the most with the least, displaying deep resource efficiency as an integral part of its design ethos—something more architects should be thinking about and practicing."

Client: "The design of the building has enhanced the beauty of our worship, the dome amplifies the singing, the special windows allow for a mystical presence, and the dedicated spaces for the icons encourage a visual attraction to His presence." —Rev. John Atchison, Saint Nicholas Eastern Orthodox Church

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AIA HONOR AWARDS

ARCHITECTURE

THE BARNES FOUNDATION

Philadelphia
Tod Williams Billie Tsien Architects, New York

Moving the famous Barnes Foundation art collection from a Paul Cret–designed gallery in Merion, Pa., to a 93,000-square-foot building in Center City required the architects to honor the past while advancing the future of the Barnes. They succeeded with a tripartite building that houses the Collection Gallery—a 12,000-square-foot space replicating the scale, proportion, and configuration of the Merion galleries—as well as an L-shaped pavilion and a light court connecting the two. Layers of landscaping, including a series of public gardens, reference the original arboretum in Merion.

Jury: "Given the collection's requirement for display in its original context, the architect cleverly placed the 'old building' within its overall solution."

Client: "We've had many comments about how lovely the processional landscape is. It works exactly the way the architects intended, bringing a sense of calm into the center of the city. This project has been very successful in every dimension." —Derek Gillman, executive director and president, Barnes Foundation

MICHAEL MORAN/OTTO

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AIA HONOR AWARDS

ARCHITECTURE

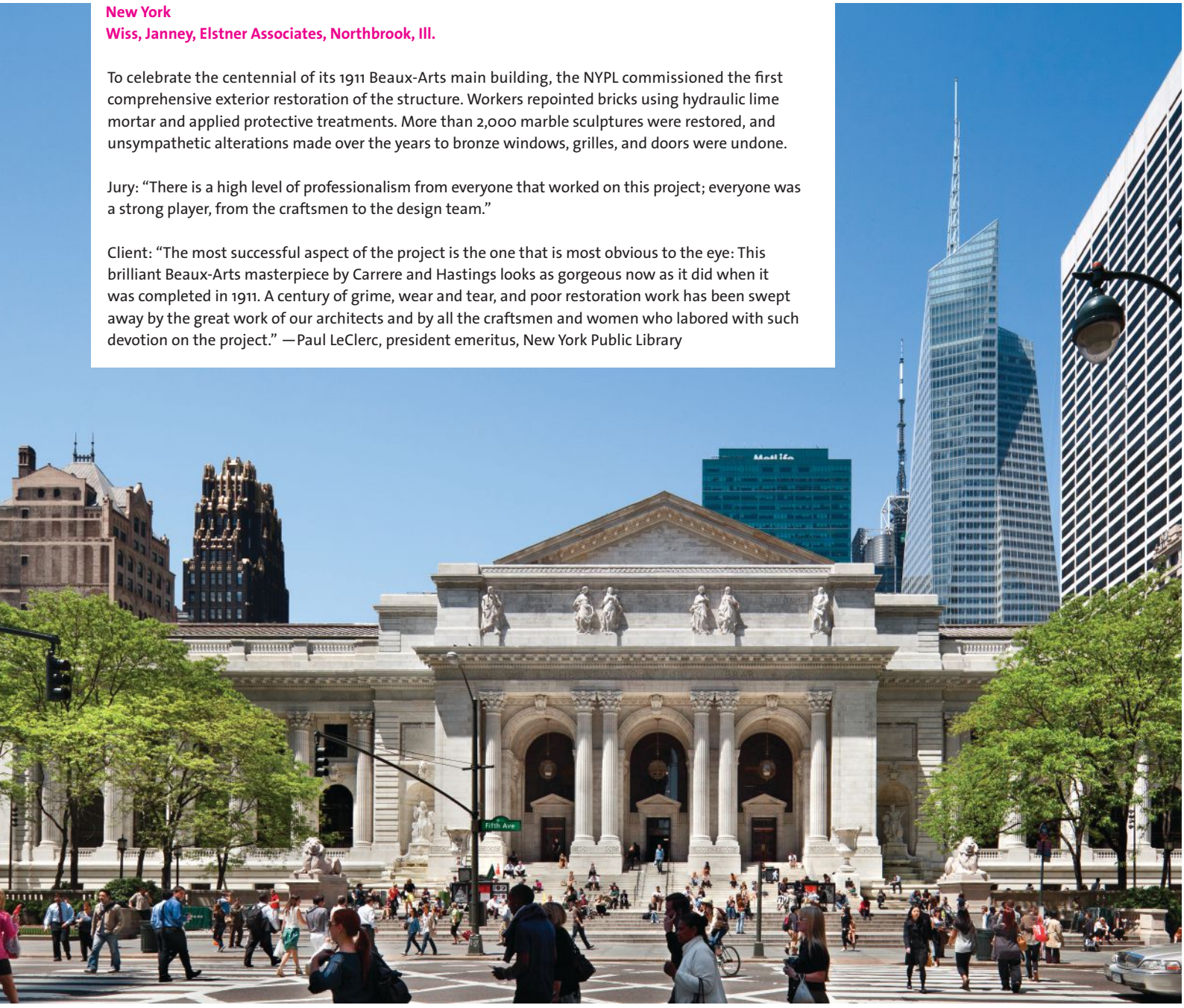
THE NEW YORK PUBLIC LIBRARY

New York
Wiss, Janney, Elstner Associates, Northbrook, Ill.

To celebrate the centennial of its 1911 Beaux-Arts main building, the NYPL commissioned the first comprehensive exterior restoration of the structure. Workers repointed bricks using hydraulic lime mortar and applied protective treatments. More than 2,000 marble sculptures were restored, and unsympathetic alterations made over the years to bronze windows, grilles, and doors were undone.

Jury: "There is a high level of professionalism from everyone that worked on this project; everyone was a strong player, from the craftsmen to the design team."

Client: "The most successful aspect of the project is the one that is most obvious to the eye: This brilliant Beaux-Arts masterpiece by Carrere and Hastings looks as gorgeous now as it did when it was completed in 1911. A century of grime, wear and tear, and poor restoration work has been swept away by the great work of our architects and by all the craftsmen and women who labored with such devotion on the project." —Paul LeClerc, president emeritus, New York Public Library



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AIA HONOR AWARDS

ARCHITECTURE

VANCOUVER CONVENTION CENTRE WEST

Vancouver, B.C.
LMN Architects, Seattle; Musson Cattell Mackey Partnership, Vancouver; DA Architects + Planners, Vancouver

The overarching goal for this 22-acre project on Vancouver's waterfront was to bridge the gap between the natural ecosystem and the city's built environment. The development manages to triple the city's downtown convention capacity while also providing 400,000 square feet of open space, including a plaza, waterfront promenade, bike paths, and a multimodal public transportation hub. Heat pumps use the seawater's constant temperature to provide free heating and cooling throughout the year.

Jury: "This large project impressed us on many levels, showing how a typically large, introverted program can thoughtfully reinforce and contribute to a prominent urban site."

Client: "Since opening our doors, the Vancouver Convention Centre's West building has proven to meet the diverse needs of event and convention organizers. Our new plaza space has also been a sought-after area for a variety of community celebrations and gatherings." —Craig Lehto, assistant general manager, Vancouver Convention Centre

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INTERIOR ARCHITECTURE

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INTERIOR ARCHITECTURE

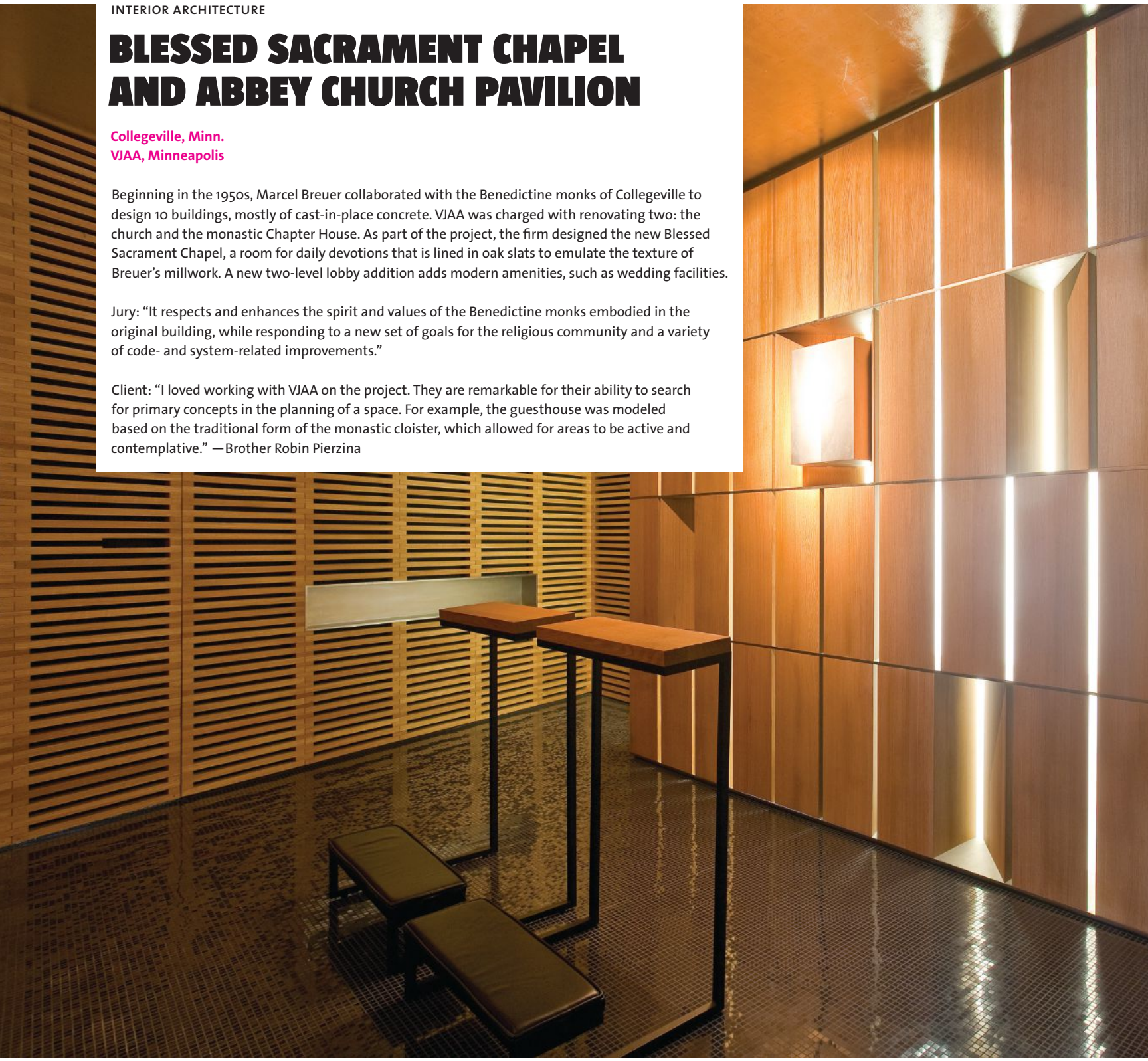
BLESSED SACRAMENT CHAPEL AND ABBEY CHURCH PAVILION

Collegeville, Minn.
VJAA, Minneapolis

Beginning in the 1950s, Marcel Breuer collaborated with the Benedictine monks of Collegeville to design 10 buildings, mostly of cast-in-place concrete. VJAA was charged with renovating two: the church and the monastic Chapter House. As part of the project, the firm designed the new Blessed Sacrament Chapel, a room for daily devotions that is lined in oak slats to emulate the texture of Breuer's millwork. A new two-level lobby addition adds modern amenities, such as wedding facilities.

Jury: "It respects and enhances the spirit and values of the Benedictine monks embodied in the original building, while responding to a new set of goals for the religious community and a variety of code- and system-related improvements."

Client: "I loved working with VJAA on the project. They are remarkable for their ability to search for primary concepts in the planning of a space. For example, the guesthouse was modeled based on the traditional form of the monastic cloister, which allowed for areas to be active and contemplative." —Brother Robin Pierzina



LEFT: PETER J SIEGER; RIGHT: FARSHID ASSASSI

INTERIOR ARCHITECTURE

BNIM IOWA

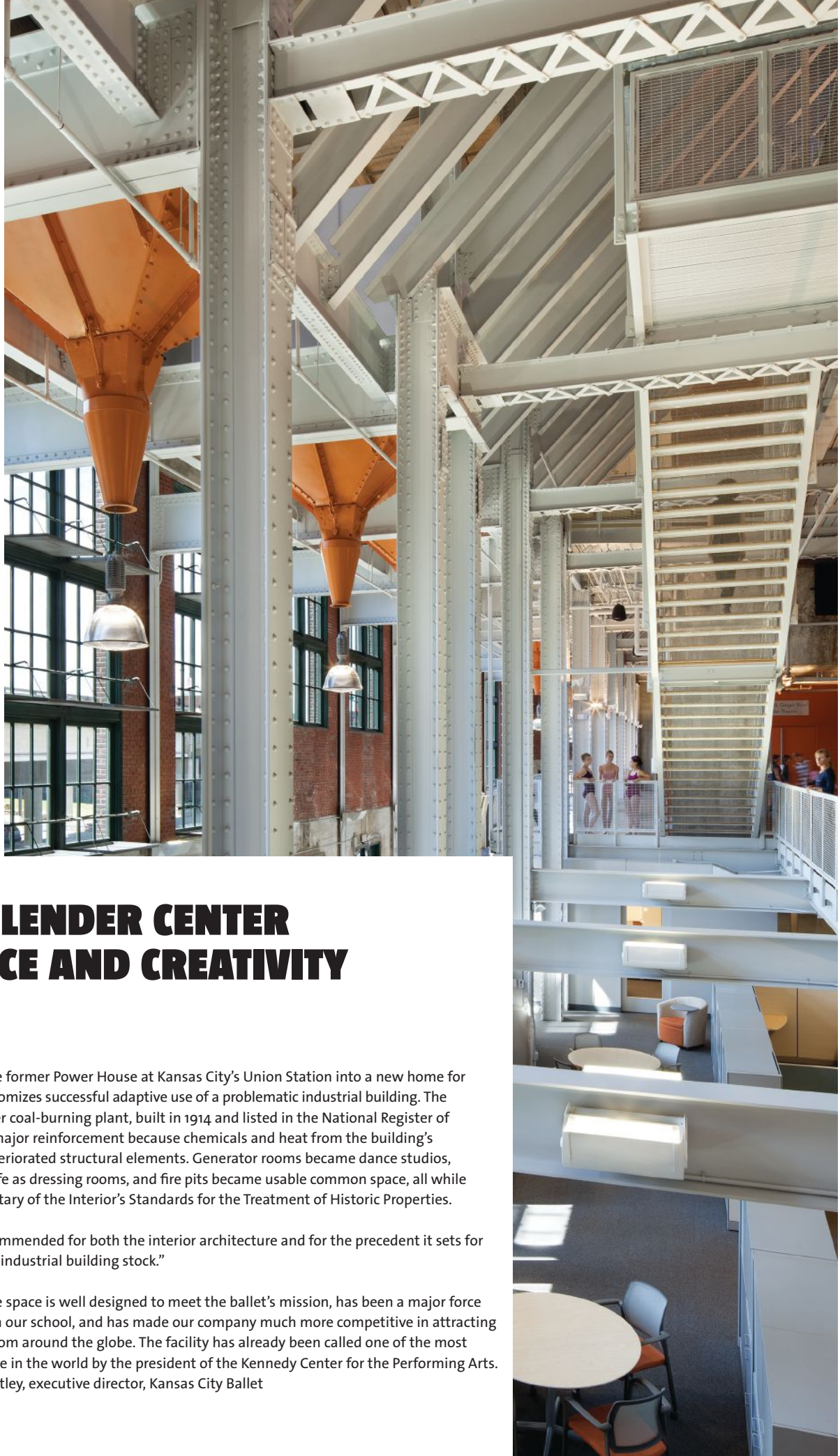
Des Moines, Iowa
BNIM, Des Moines, Iowa

When selecting a new location for its Des Moines headquarters, BNIM chose to renovate a former bank in the city's central business district. The firm enlivened the façade of the building, which had been vacant for several years, by adding windows and views into the interior space. Inside, the open plan is organized around the existing window module. A 60-foot, cork-clad central wall serves as the creative hub for critiques and collaboration. Visible from the street, the wall engages passersby with a vibrant display of the firm's work in progress.

Jury: "This project has the mark of a mature designer [who was] willing to reduce the existing space to its barest essentials. It exhibits restraint and control to make a very elegant and sophisticated design solution."

Client: "We wanted an office that would be conducive to a collaborative work mode, and we also wanted a space that would contribute to the central business core of the city and help revitalize street activity. The response has been fantastic. People peer in with their faces against the glass to see what's going on inside." —Rod Kruse, FAIA, principal, BNIM

AIA HONOR AWARDS



INTERIOR ARCHITECTURE

TODD BOLENDER CENTER FOR DANCE AND CREATIVITY

Kansas City, Mo.
BNIM, Kansas City, Mo.

This transformation of the former Power House at Kansas City's Union Station into a new home for the Kansas City Ballet epitomizes successful adaptive use of a problematic industrial building. The 52,000-square-foot former coal-burning plant, built in 1914 and listed in the National Register of Historic Places, required major reinforcement because chemicals and heat from the building's industrial heyday had deteriorated structural elements. Generator rooms became dance studios, coal bunkers found new life as dressing rooms, and fire pits became usable common space, all while adhering to the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties.

Jury : "This project was commended for both the interior architecture and for the precedent it sets for the reuse of the country's industrial building stock."

Client: "The interior of the space is well designed to meet the ballet's mission, has been a major force in increased enrollment in our school, and has made our company much more competitive in attracting the highest-level talent from around the globe. The facility has already been called one of the most beautiful centers for dance in the world by the president of the Kennedy Center for the Performing Arts. And rightly so." —Jeff Bentley, executive director, Kansas City Ballet

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INTERIOR ARCHITECTURE

CHARLES SMITH WINES

Walla Walla, Wash.
Olson Kundig Architects, Seattle

Rock-n-roll-band-manager-turned-winemaker Charles Smith asked Olson Kundig to turn the 1917 Johnson Auto Electric building into a wine-tasting room and office while retaining the raw spirit of the industrial structure. Leaving the existing brick walls, wood trusses, and concrete floor intact, the architects designed a flexible program, inserting a prefabricated unit into the building. Dubbed the Armadillo, it can transform from an office, tasting room, and retail store into a dining and entertainment venue. Two custom, hand-cranked pivot doors replaced the original garage doors, and double as an awning for outdoor seating.

Jury: "A great solution for a simple space reflecting an attitude of restraint and editing. The project is gritty and urban, and integrates the exterior with the interior for a sort of 'rough luxe' aesthetic."

Client: "It's rare that you find a partner like Tom Kundig, who not only understands the intent of a project but nearly anticipates it. We were in complete agreement from the onset, specifically about how wine is not about a tasting room or office, but about the vineyards and the winemaking process. The building expresses this fact and brings you to the true heart of what we do." —Charles Smith

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AIA HONOR AWARDS

INTERIOR ARCHITECTURE

CHICAGO APARTMENT

Chicago
VJAA, Minneapolis

VJAA designed this 5,500-square-foot penthouse apartment, located in a new high-rise building, to display the client's collection of contemporary Asian art. Warm walnut floors define the four-bedroom home, while an open-slatted walnut ceiling in the living room, dining room, and kitchen conceals lighting fixtures, sprinklers, and acoustical material. The ample public area is delineated not by walls but by planes of perforated aluminum, giving the space composure, but also a sense of air and light.

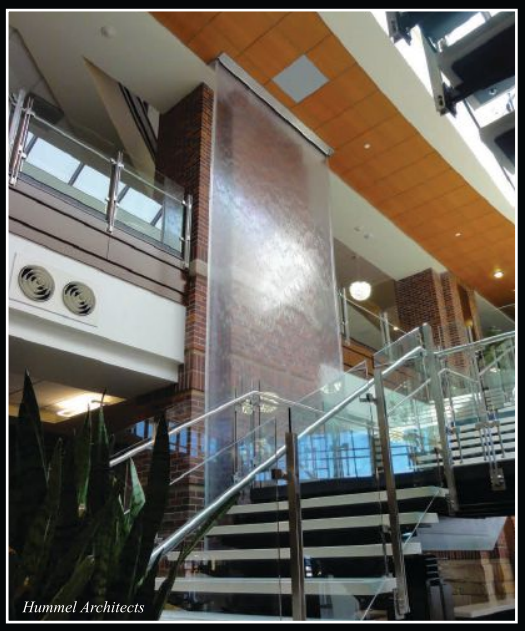
Jury: "This is a beautifully conceived and detailed work of interior architecture employing traditional principles of Modernism while transforming and extending that language with an innovative and carefully considered vocabulary of materials, colors, and patterns."

Client: Wished to remain anonymous and declined comment.

PAUL CROSBY STUDIO

Architect: Anderson Mikos

InterContinental Miami, Miami, FL



Hummel Architects

DGA planning\architecture\interior, Photo Credit: David Cox (DPR)

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INTERIOR ARCHITECTURE

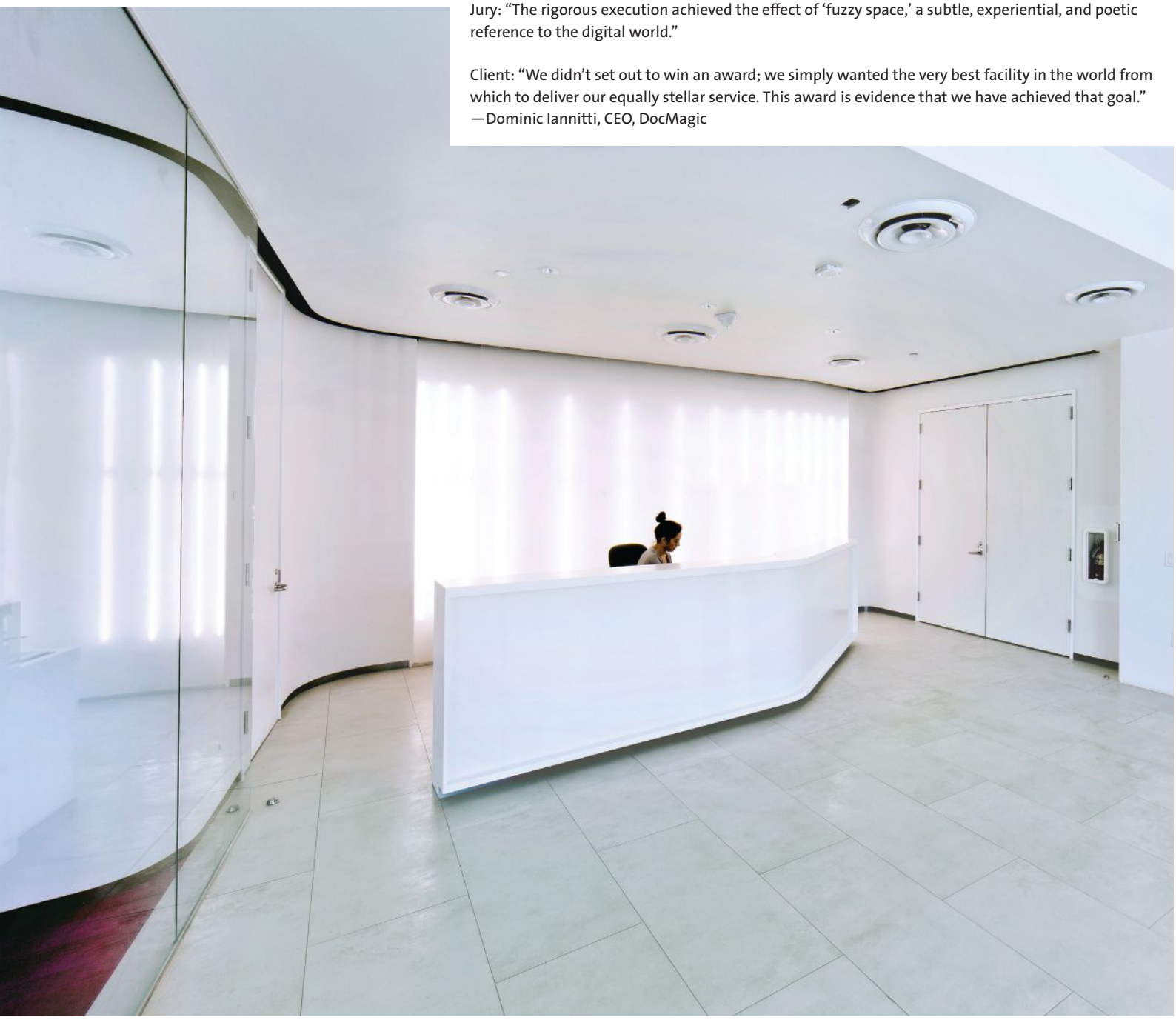
DOCMAGIC

Torrance, Calif.
RA-DA, West Hollywood, Calif.

DocMagic, a loan document company that delivers highly sensitive information over the Internet, wanted to convey the high-tech nature of its business to clients and visitors. The architects pursued a concept of digital information zooming through cyberspace, designing corridors that use a complex binary lighting system behind translucent walls. With no visible hardware or attachments, the walls suggest the "fuzzy edge" of the virtual world. The working spaces—including meeting rooms and offices—are grounded in bright colors that contrast with the pristine light of the corridors.

Jury: "The rigorous execution achieved the effect of 'fuzzy space,' a subtle, experiential, and poetic reference to the digital world."

Client: "We didn't set out to win an award; we simply wanted the very best facility in the world from which to deliver our equally stellar service. This award is evidence that we have achieved that goal." —Dominic Iannitti, CEO, DocMagic



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Baton Rouge, La.
Eskew+Dumez+Ripple, New Orleans

Eskew+Dumez+Ripple took a nondescript 1979 bank data center and turned it into an open, light-filled work environment for a billboard advertising company. The architects didn't alter the building's exterior, but radically changed the interior by introducing a courtyard "garden room" that brings light into the middle of the floor plate and a green landscape into the center of the office. The result is a radical reinterpretation of what many considered a throw-away building.

Jury: "This project shows the potential for the reuse of the growing catalog of mid- and late-20th-century low-rise buildings throughout the country, and demonstrates how an interior transformation can be a more sustainable approach than demolition and new construction."

Client: "We're a creative company, and this new office engenders creative thought and collaboration. It's a more joyful, open, airy, and bright space, and the way we all interact is completely different. We polled our staff after moving in and found that the majority of our 200 employees reported that they collaborate more than before." —Sean Reilly, CEO, Lamar Advertising Co.

AIA HONOR AWARDS

TIMOTHY HURSLEY

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AIA HONOR AWARDS

LARA SWIMMER

INTERIOR ARCHITECTURE

PACCAR HALL AT THE UNIVERSITY OF WASHINGTON'S FOSTER SCHOOL OF BUSINESS

Seattle
LMN Architects, Seattle

This LEED Gold–certified project includes two new, interconnected buildings and the renovation of an existing subterranean library for the Foster School of Business. The project succeeds in coexisting with the historic buildings on campus while espousing the university's contemporary architectural goals of integrating social, pedagogical, and natural environments. A four-story daylit atrium runs the length of the building and serves as a social hub. A series of interconnected common spaces host impromptu gatherings, programs, and special events.

Jury: "The project has a beautiful quality of porosity and openness, connecting inside with the rich natural environment of the University of Washington and the various levels of a complex institutional program within."

Client: "The architects nailed it in making the building an inviting place where students, faculty, and staff gather and interact in many different ways. Our building is working wonderfully, and it is arguably the most popular building on campus among students." —Roland E. (Pete) Dukes, professor of accounting

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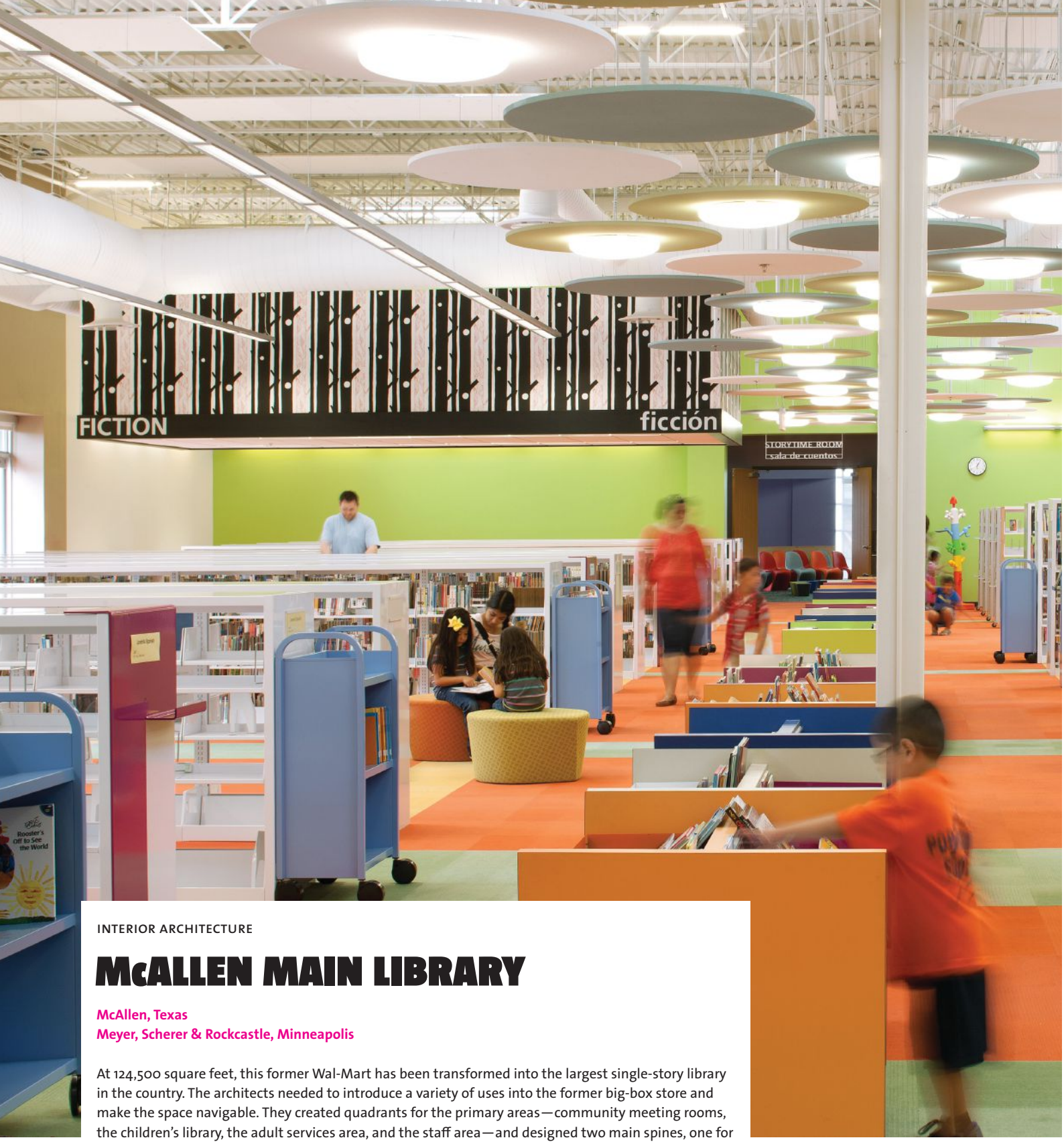


INTERIOR ARCHITECTURE

McALLEN MAIN LIBRARY

McAllen, Texas
Meyer, Scherer & Rockcastle, Minneapolis

At 124,500 square feet, this former Wal-Mart has been transformed into the largest single-story library in the country. The architects needed to introduce a variety of uses into the former big-box store and make the space navigable. They created quadrants for the primary areas—community meeting rooms, the children's library, the adult services area, and the staff area—and designed two main spines, one for central services and a second for community and staff areas. The material palette and design concept was inspired by the city's abundant natural history, including the migration patterns of many birds, insects, and mammals.

Jury: "While many of the external site characteristics could not be changed, the design team signaled that 21st-century attitudes toward design are evolving quickly."

Client: "This library doesn't look like a traditional library, and you can see it on people's faces when they walk in. They are amazed. The library has become not just a place for books and quiet study, but also a community center. We're now averaging 65,000 people a month." —Kate Horan, library director

AIA HONOR AWARDS

ED LACASSE

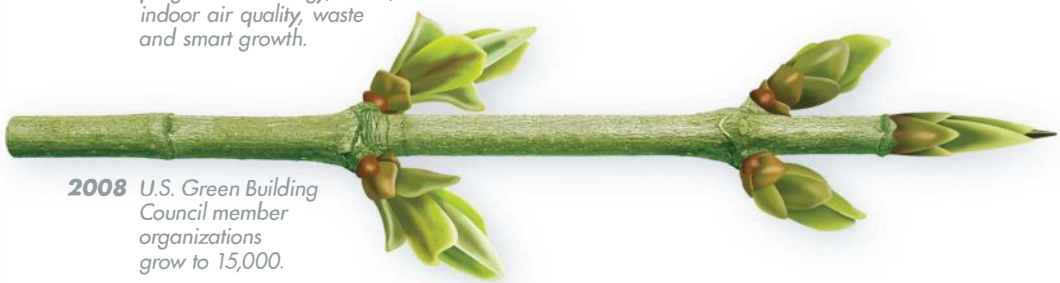
WHO SHAPES THE FUTURE OF GREEN DESIGN?

1968 *Social environmental movements take hold.*

1978 *Earth Day brings awareness to Earth's need for continual care.*

1988 *1,000 communities in America initiate curbside recycling.*

1998 *EPA launches voluntary programs for energy, water, indoor air quality, waste and smart growth.*



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William L. Pereira & Associates, *Transamerica Corporate Headquarters Tower*, San Francisco, California, 1973. Photograph by Albert Tam, 2011. www.albert-tam.com

AIA HONOR AWARDS

REGIONAL + URBAN DESIGN

AIA HONOR AWARDS

REGIONAL + URBAN DESIGN

BURNHAM PLACE AT UNION STATION

Washington, D.C.
Shalom Baranes Associates, Washington, D.C.; HOK, Washington, D.C.

This plan calls for 9 million square feet of new construction within the footprint of Washington, D.C.'s existing Union Station and rail yard. By integrating new high-capacity and intermodal transit facilities with high-density, mixed-use development, as well as a network of public spaces, this plan promises to add a vibrant new neighborhood above the underground transit facility.

Jury: "It is ambitious urban design that interweaves the public and private realms. With some relatively small moves, it successfully defines public space."

Client: "I don't think it's an overstatement to say this is likely the most challenging planning exercise for an urban transportation project on the East Coast, if not the country. It involves taking a century-old facility and doubling the number of trains that can come, adding new modes to that facility, and expanding the number of ways passengers can get in and out—all while keeping the station operational and creating a mixed-use neighborhood on top."
—David Tuchmann, vice president of development, Akridge

LEFT: AKRIDGE AND SHALOM BARANES ASSOCIATES, PC/AMTRAK AND HOK; RIGHT: PWL PARTNERSHIP/LMN ARCHITECTS/NIC LEHOUX

REGIONAL + URBAN DESIGN

COAL HARBOUR DISTRICT

Vancouver, B.C.
LMN Architects, Seattle; Musson Cattell Mackey Partnership, Vancouver; DA Architects + Planners, Vancouver

Once an industrial area marked by shipyards and lumber mills, the Coal Harbour convention district on Vancouver's downtown peninsula has been the focus of redevelopment efforts since the 1980s. The new district has finally succeeded in revitalizing the area by knitting the convention center into a larger strategic plan. The building defines new public open space and extends the city's pedestrian activity to the waterfront, while a public promenade and bike trail link to the city's park system. A major civic plaza and a 6-acre living roof (the largest in Canada) create a balance between the urban and the natural.

Jury: "The project transforms the convention center typology into a true 'civic' piece of the city. The balance of built and open space is spectacular, and the linear orientation of the park and convention center take full advantage of the water's edge."

Client: "Our LEED Platinum–certified facility successfully engages, preserves, and integrates with the surrounding natural ecology of the waterfront, park spaces, and urban setting." —Craig Lehto, assistant general manager, Vancouver Convention Centre

REGIONAL + URBAN DESIGN

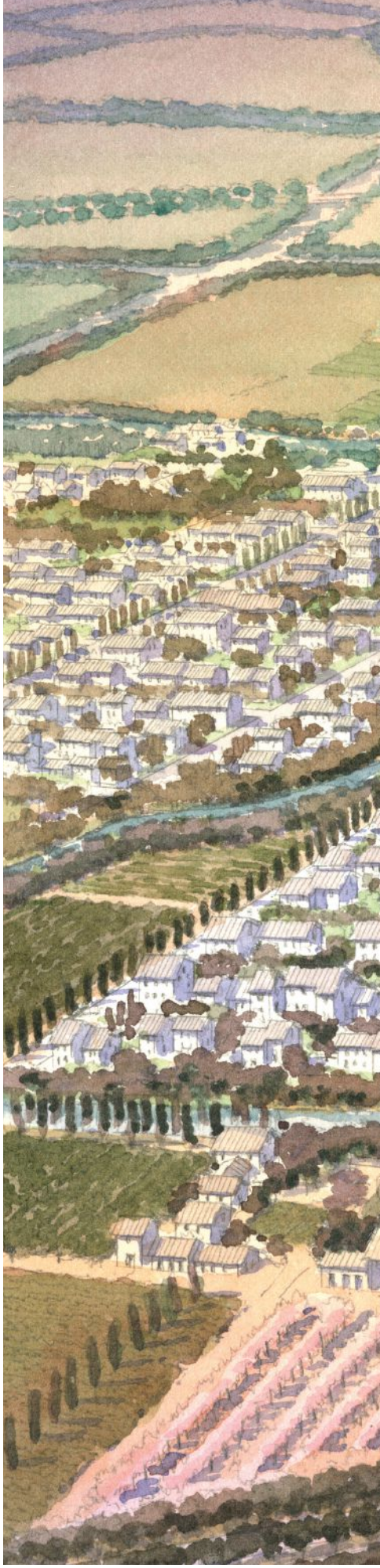
GREAT LAKES CENTURY

Great Lakes and St. Lawrence River Region
Skidmore, Owings & Merrill, Chicago

A 100-year plan, the Great Lakes Century outlines how the hundreds of cities and more than 50 million people who live around the world's largest freshwater resource can spur economic and environmental renewal. It is the first comprehensive plan to address regional solutions for renewable energy, sustainable agriculture practices, transit, and urban regeneration.

Jury: "This is a strong environmental vision for an important global natural asset. There is power in the grand scale and how it looks at regional sustainability—less in terms of direct environmental protection and more in terms of a transformational shift to a green regional economy catalyzed by high-speed rail connectivity."

Client: "The Great Lakes region represents 20 percent of the world's surface fresh water. We don't think enough as a region. We tend to be very parochial. SOM was able to integrate social, economic, and environmental issues in a way that we have not been able to do in the past." —Dave Ullrich, executive director, the Great Lakes and St. Lawrence Cities Initiative



LEFT: SKIDMORE, OWINGS & MERRILL; RIGHT: SKIDMORE, OWINGS & MERRILL/CHRISTOPHER GRUBBS ILLUSTRATOR

AIA HONOR AWARDS

REGIONAL + URBAN DESIGN

NANHU VILLAGE MASTER PLAN

Jiaxing, Zhejiang province, China
Skidmore, Owings & Merrill, San Francisco

The Nanhu New Country Village master plan introduces a new type of development to this rapidly urbanizing and polluted region in China. A majority of the site is maintained as working farms, while the traditional architectural style of the region is reinterpreted to create structures that integrate with the environment. The design centers on a network of contaminated canals, which will be remediated by new infrastructure.

Jury: "This is an excellent example of sustainable design that supports food production and habitable spaces, and that establishes a viable regional footprint for agriculture, housing, and natural conservation."

Client: "In China, most of the developments are really big. We asked SOM to help us introduce a more human-scaled project so that people can walk and have that village feeling. This area is quite polluted, and SOM has been giving us new information on how to do a constructed wetland so that we can actually clean the river water." —Iris Ting, director of the design department, Jiaxing Alliance Development Corp.

AIA HONOR AWARDS

REGIONAL + URBAN DESIGN

ROCK STREET POCKET HOUSING

Little Rock, Ark.
University of Arkansas Community Design Center, Fayetteville, Ark.

Pettaway, once a thriving streetcar neighborhood in Little Rock, today is in decline. The design center's plan for pocket housing—clusters of four to 16 homes around shared outdoor commons and infrastructure—promises affordable-housing options larger than single-family houses but smaller than mid-rise flats. The houses offer quality medium-density living in a walkable, transit-oriented neighborhood along with shared amenities such as community lawns, playgrounds, stormwater management infrastructure, frontages, and common building templates.

Jury: "It is thorough, achievable, and detailed, with a fresh design approach that is also supportive of the context."

Client: "I love the pocket house concept with the shared space—the ability to live in close proximity to others and to come out on the front porch and interact. The result is a catalyst for revitalization. We're seeing more people move into the neighborhood." —Scott Grummer, executive director, Downtown Little Rock Community Development Corp.

LEFT: UNIVERSITY OF ARKANSAS COMMUNITY DESIGN CENTER; RIGHT: IWAN BAAN

REGIONAL + URBAN DESIGN

SUPERKILEN

Copenhagen
Bjarke Ingels Group (BIG), Copenhagen and New York

This half-mile-long urban park is a playful, colorful, and thought-provoking celebration of the neighborhood's more than 50 nationalities. Trails for pedestrians and cyclists, connections to local transport, and outdoor recreation spaces, as well as a market space and game areas, are complemented by benches, lampposts, trash cans, and plants that were selected by the area's diverse residents. Durable materials and cost-effective solutions make this park a giant exhibition of urban best practices.

Jury: "This project is a joy! This is not only original, but stunning to behold. Superkilen shows what can be done with an open, inventive approach within severe cost limitations."

Client: "It's important that cities have exciting spots like Superkilen, because they heighten the livability in the city. Almost 60 different nationalities live in this part of Copenhagen, and all nationalities are represented at Superkilen with playing tools, activities, and sorts of plants."
—Ayfer Baykal, technical and environmental mayor, Copenhagen

AIA HONOR AWARDS

REGIONAL + URBAN DESIGN

NATIONAL SEPTEMBER 11 MEMORIAL

New York
Handel Architects, New York

Handel beat out more than 5,200 entrants who competed to design the 8-acre plaza in Lower Manhattan, where the World Trade Center towers once stood. Today, a permeable canopy of nearly 400 swamp white oak trees defines the memorial space. Two reflecting pools recessed 30 feet into the ground and lined by waterfalls mark the acre-sized voids left by the towers. The memorial offers a place of quiet contemplation while celebrating the power of public space.

Jury: "It lives up to its role as a significant and appropriate memorial, but also acts as a functioning part of a more livable and beautiful city by providing remarkable views from above, casual seating for daily use, as well as the emotional experience of the memorial."

Client: "Since we opened in 2011, there have been more than 7 million people who have visited this site. It has not only given people the opportunity to pay their respects, but it has also turned a place that was destitute after the attacks into a beautiful place that shows our rebirth and our resiliency." —Michael Frazier, vice president of communications, National September 11 Memorial

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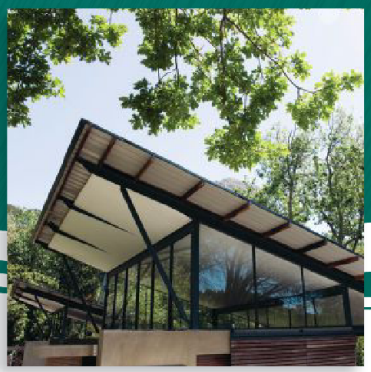

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AIA HONOR AWARDS

REGIONAL + URBAN DESIGN

PARKMERCED VISION PLAN

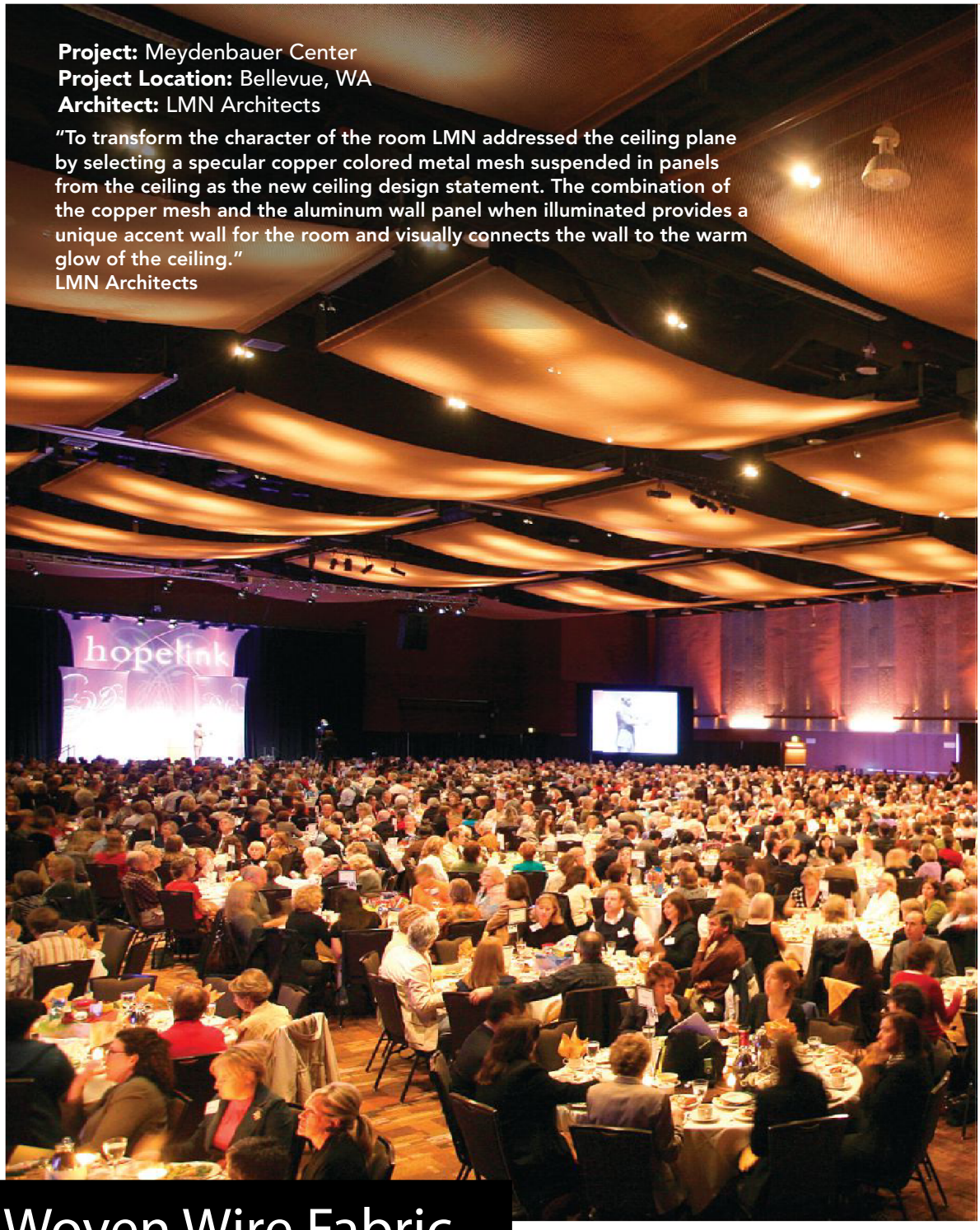
San Francisco
Skidmore, Owings & Merrill, San Francisco

This plan transforms the Parkmerced development, built just after World War II, into a model of environmentally sustainable, urban living. Originally designed with the automobile in mind, the 152-acre site with aging apartment buildings will become a pedestrian-friendly, mixed-use neighborhood marked by larger, more usable open spaces. Improved transit connections will reduce car use.

Jury: "This is one of the most ambitious retrofits of an existing suburban apartment complex with green infrastructure this jury has seen. Instead of typical 'urban' or 'suburban' streetscapes, it will provide a new high-performing, hybrid experience that is both dense and lush."

Client: "Given the enormous public process involved, and the long horizon of 25 to 30 years of implementation, SOM needed to be both nimble and resilient. The result is a plan that, when brought to fruition, will improve San Francisco's west side immeasurably, and lead the way for urban planning throughout the nation." —Seth Mallen, executive vice president, Parkmerced

SKIDMORE, OWINGS & MERRILL/STEVE PROEHL STUDIOS



Project: Meydenbauer Center
Project Location: Bellevue, WA
Architect: LMN Architects

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LMN Architects

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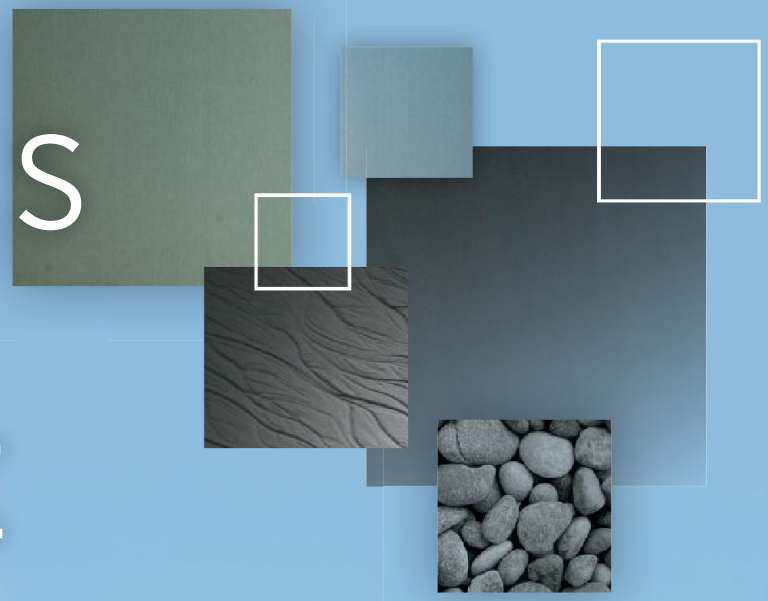

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AIA AWARDS

AIA AWARDS

WHITNEY M. YOUNG JR. AWARD

HARVEY B. GANTT, FAIA, PRINCIPAL, GANTT HUBERMAN ARCHITECTS

"I'm happy to know that this is going to give other Negroes an opportunity to go to Clemson," a 20-year-old Harvey Gantt told *The New York Times* in 1962, when he became the first African-American student to enroll in the South Carolina school. "But my main purpose here," he continued, "is to get an education." Gantt, who grew up in a Charleston, S.C., housing project, graduated third in his class and received a master's in urban planning from M.I.T. In 1971, he partnered with Jeffrey Huberman to found North Carolina's first racially integrated architecture firm—a time, he recalls, when "there were few African-American architects, period." In 1968, Gantt had worked with civil-rights activist Floyd McKissock as a planner for Soul City, a visionary though ill-fated community for minorities and the poor outside Raleigh, N.C. "It was just too much of an experiment for the private sector to step up," he says. Appointed to Charlotte's City Council in 1975, he became the city's first African-American mayor in 1983. "I thought that architects were uniquely qualified to solve problems in cities—dealing with developers, stimulating private investments, maintaining a downtown," he says. In 1995, after Gantt's first of two unsuccessful U.S. Senate campaigns against Jesse Helms, President Bill Clinton appointed him the chairman of the National Capital Planning Commission, which adopted plans for the World War II and Martin Luther King Jr. memorials during his tenure. "I think back to what Whitney Young said to architects back in 1968," Gantt says. "There's a role for us to play. So many urban areas lack leadership, and it's so important to build memorable places, beautiful cities—not just for the wealthy, but for the whole community. Those words make even more sense today." **ALEX HOYT**

YOUNG ARCHITECT AWARD

DERWIN BROUGHTON, AIA

A project architect at the Dallas-based firm KAI Texas, Broughton has distinguished himself in his early career through his civic leadership. He is the current chair of AIA Dallas's Young Architects Forum, and has worked with such groups as the National Organization of Minority Architects. "He has a great understanding of what it means to be a community leader and practicing architect," the judges said. "Derwin is a great example of the citizen-architect."

ANDREW CARUSO, AIA

Caruso has developed an eye for emerging architects and honed his professional development skills as the head of Intern Development and Academic Outreach for Gensler in the firm's Washington, D.C., office. He works closely with Gensler's chief executives to guide the firm's strategy for developing talent. The judges lauded Caruso for "insight and provocation" that have helped advance architecture. "In a few short years, he has created a body of work that has had a profound impact on our profession."

KATHERINE DARNSTADT, AIA

As the founder and principal of Latent Design in Chicago, Darnstadt has emphasized a community-based, participatory design process that melds architecture and community development. Her firm has made pro bono work a significant part of its core mission. "She embraces her latitude as a practitioner to create solutions for clients that go beyond a building, and that includes academic curricula, place-making strategies, and policy changes related to food access," said the judges.

PHOTO BY ANDY SCOTT; ILLUSTRATIONS BY PETER ARKLE

YOUNG ARCHITECT AWARD *(continued)*

SUSANNAH C. DRAKE, AIA

Drake is the founding principal of Dlandstudio in Brooklyn, N.Y., an interdisciplinary practice that has explored ecological solutions to rising sea levels. The firm's Gowanus Canal Sponge Park in Brooklyn, which helps clean contaminated water, was an innovative reimagining of a Superfund site. Said the judges: "She has an energetic, intelligent, and collaborative approach to urban design, and her public projects have greatly contributed to our understanding of, and potential solutions to, the challenge of climate change and rising seas."

ERIC REID HOFFMAN, AIA

A professor of practice in the Sam Fox School of Design & Visual Arts at Washington University in St. Louis, and co-director of the firm Patterhn, Hoffman seamlessly moves between the academic and professional worlds. His mentorship of students often continues beyond graduation. And his own work pushes the boundaries of systems integration and building technology. The judges lauded him for his "design leadership, ability to communicate, and robust skill-set," and called him "an outstanding professor, designer, and mentor."

MATTHEW DUMICH, AIA

A project manager with Valerio Dewalt Train & Associates in Chicago, Dumich has contributed to the firm with his work on a wide range of residential, institutional, and mixed-use projects, as well as through his contributions to professional development. He co-founded AIA Chicago Bridge, a mentoring program that partners emerging architects with local fellows. It "bodes well for our profession that we have such dedicated commitment, expertise, maturity, and ambition in such a young architect and professional," said the judges.

THOMAS HUSSEY, AIA

Hussey has attempted to bridge the gap between architecture and urban planning in a series of high-profile projects that he has worked on as an architect in Skidmore, Owings & Merrill's Chicago office. He is the chief designer for the Beijing Bohai Innovation City master plan, an innovative new approach to transit-oriented development in China. "An accomplished leader in a new generation of city designers, he exemplifies what our profession needs to meet its tremendous global responsibility," said the judges.

JOHN DWYER, AIA

By the time Dwyer founded his eponymous firm, John Dwyer Architect, in Minneapolis in 2010, he had already compiled an enviable résumé. Most notably, in 2007, he founded a design studio in post-Katrina New Orleans and provided pro bono services to more than 60 households in the 9th Ward. Said the judges, "His leadership in restoring parts of the 9th Ward in New Orleans is inspiring and demonstrates his strong commitment to designing for the public interest."

VIRGINIA ELAINE MARQUARDT, AIA

Marquardt has distinguished herself as an architect at the DLR Group with her leadership, securing a position on the firm's K–12 Forum. She has also distinguished herself with her commitment to emerging professionals, helping to launch DLR's intern development program and introducing the most recent iteration of the program to the firm's Santa Monica, Calif., office. Said the judges: "An outstanding example of the young professional we often talk about when we describe this group as the Institute's, and the profession's, best hope for the future."

PHOTO BY NOAH KALINA; ILLUSTRATIONS BY PETER ARKLE

AIA AWARDS

TOPAZ MEDALLION

ROBERT GREENSTREET, INTL. ASSOC. AIA; DEAN, SCHOOL OF ARCHITECTURE AND URBAN PLANNING, UNIVERSITY OF WISCONSIN AT MILWAUKEE (UWM)

"We're a public university, and we have a very pronounced public mission," says Robert Greenstreet, the dean of UWM's School of Architecture and Urban Planning since 1993, and Milwaukee's chair of City Planning since 2004. Twelve years ago, he created Community Design Solutions, a program that pairs students with AIA members to work, pro bono, on small-scale neighborhood projects. "It's a useful way for us to get involved in the texture of the community," says Greenstreet. As the chair of Milwaukee's City Plan Commission from 1993 to 2004, he overhauled obsolete zoning regulations and helped select Santiago Calatrava, FAIA, as the architect of the Milwaukee Art Museum. During his 35 years as an educator—at such institutions as Oxford Polytechnic University (where he received his Ph.D. in architecture in 1983) and the University of Kansas—he has taught a breadth of courses, from law and practice to architectural journalism. At UWM, he has fostered a richly interdisciplinary curriculum. "My whole goal is to make us relevant," he says. "We can point to every new building on the skyline of Milwaukee and say who's been involved—students, faculty, alumni. Our fingerprints are all over the place." **A.H.**

AIA AWARDS

THOMAS JEFFERSON AWARD

MICHAEL PYATOK, FAIA, PRINCIPAL AND FOUNDER, PYATOK ARCHITECTS

During his freshman year at Pratt Institute, Mike Pyatok and his classmates boycotted their classes and shut down the School of Architecture. "We wanted to learn something more relevant," says Pyatok, who grew up in nearby industrial Brooklyn with a single mother who was on welfare until he was six. "Watching the factory [in my neighborhood close] while learning about the Medicis, the Pope—there was such dissonance there." After getting his M.Arch. from the Harvard Graduate School of Design, Pyatok completed a Fulbright Fellowship in Helsinki, where he embraced the importance of social housing. Five years later, he was on the faculty at Washington University in St. Louis when Pruitt-Igoe was detonated. "A shocking event," he says, which only solidified his commitment to public housing. Since founding his Oakland, Calif.–based firm in 1984, he has designed over 35,000 affordable-housing units in the U.S. On the boards is an Oakland project in which low-income families will live alongside graduate students from a nearby university. There will be a social services agency, a childcare clinic, and a rooftop garden tended by Alice Waters. "It will be like a boarding school," Pyatok says. "Forever a learning environment." **A.H.**

PHOTO BY ANDY SCOTT; ILLUSTRATIONS BY PETER ARKLE

YOUNG ARCHITECT AWARD *(continued)*

RACHEL MINNERY, AIA

Minnery, an architect with Environmental Works, a Seattle-based firm, has distinguished herself with her disaster relief work. The co-founder of Architects Without Borders Seattle, she has organized post-disaster building assessment missions in the U.S. and Haiti. In 2005, she helped train Mississippi state officials to assess Hurricane Katrina damage. "Rachel exemplifies the ideal of an architect thoroughly involved in community activism, reaching out to support communities in crisis," said the jury.

BRETT CHARLES TAYLOR, AIA

A project manager in Skidmore, Owings & Merrill's Chicago office, Taylor has earned praise both for his ability to foster an efficient, smooth construction process, as well as the countless hours that he has spent volunteering for Rebuilding Together Metro Chicago, a national nonprofit organization that helps to improve the homes and communities of elderly, disabled, and low-income residents. The jury described him as "a promising young architect who exhibits exceptional skill, knowledge, leadership, and commitment in every aspect of his professional career."

DEEPIKA PADAM, AIA

The principal of Blend Architecture in San Francisco, Padam can point to numerous leadership positions that reflect her commitment to sustainable design practices and young professionals. She founded the Emerging Professionals/ Young Architects Forum at AIA Las Vegas, served as president of USGBC Nevada, and was the communications adviser for the AIA Young Architects Forum from 2011 to 2012. "In addition to being a natural leader, she has compassion and integrity, and is a great asset to the profession," said the jury.

LUCAS TRYGGESTAD, AIA

As an associate director and studio head in Skidmore, Owings & Merrill's Chicago office, Tryggestad is helping to create a new project methodology to define metrics for carbon reduction, energy efficiency, and water conservation. His commitment to sustainable design extends to his work with Retrofit Chicago's Commercial Building Initiative, which looks to increase energy efficiency in commercial buildings. "He has an enthusiastic dedication to the profession, with impressive community involvement that is only enhanced by his positive attitude and caring approach to all he touches," said the jury.

ALISSA D. LUEPKE PIER, AIA

As the principal architect at A.D.L. Pier Design in Minneapolis, Luepke Pier has grown her practice through dozens of residential and urban design projects. She has also embraced the citizen-architect role, serving as commissioner of the Minneapolis Board of Adjustment, and as a commissioner on the city's planning commission. Said the jury: "Dedicated and service oriented, with seemingly limitless amounts of energy, she brings the practice of professional architecture to life."

JENNIFER A. WORKMAN, AIA

A project leader with Good Fulton & Farrell Architects in Dallas, Workman has collaborated on such projects as the Perot Museum of Nature and Science, as well as several large-scale retail developments. She is a former chair of the Young Architects Forum Advisory Committee. "Her dedication to the profession has been extraordinary," said the judges, who noted her volunteer work to raise funds for scholarships for underprivileged youth, as well as her involvement with the Family Place, a nonprofit that supports homeless women.

ASSOCIATES AWARD

G. MARTIN MOELLER JR., ASSOC. AIA

The senior curator at the National Building Museum in Washington, D.C., Moeller has overseen widely successful shows such as "Unbuilt Washington" and "Liquid Stone," the latter of which explored innovative uses of concrete in architecture. He has also authored two editions of the *AIA Guide to the Architecture of Washington, D.C.* "Through his articles, books, and exhibitions, he has proved his dedication to the field and showed the importance of architecture to the public," said the jury.

JESSICA SHERIDAN, AIA

Sheridan, based in Gensler's New York office, has embraced her role as ambassador for the profession, especially through her work with the AIA New York Center for Architecture. For the local chapter, she has also made significant contributions to the emerging professionals committee and online journal e-Oculus. Said the jury: "She is a voice for those not practicing architecture in a conventional way, and her tireless contributions to the profession embody what it should mean to be an associate of the AIA." (She was licensed in March.)

PATRICK THOMAS WEBER, ASSOC. AIA

An associate at Smith Gee Studio in Nashville, Tenn., Weber has served as project manager for a downtown historic façade renovation project in Winchester, Tenn., aimed at preserving the state's town square heritage. He has also been lauded for his leadership, serving as AIA Gulf States regional associate director, and currently as board treasurer at Rebuilding Together Nashville, an affordable housing nonprofit. "His perception, vision, talent, skills, perseverance, and dedication reflect the unique attributes of his generation," said the jury.

COLLABORATIVE ACHIEVEMENT AWARD

DISCOVERDESIGN.ORG

An innovative website launched in 2012 by the Chicago Architecture Foundation, DiscoverDesign.org, spearheaded by project manager Jen Masengarb (left), has helped more than 1,700 high school students around the country learn about architecture. Students can connect with working designers and get feedback on design-related projects. "This revolutionary program has filled a critical need within the architecture profession to provide students with the opportunity to participate in a vast, robust online community of like-minded teens around the country," the jury said.

PALM SPRINGS MODERN COMMITTEE

The committee, founded 14 years ago, and now led by president Chris Menrad (left), has become an important advocate for the preservation and appreciation of the modernist architectural legacy of Palm Springs, Calif. "This organization is a superb example for the rest of the country of how a small group of passionate people can make a big difference. Their work has cultivated a serious appreciation for design and preservation and provides a singular model for a younger generation of students," the jury said.

DC PRESERVATION LEAGUE

The league, chaired by executive director Rebecca Miller (left), has advanced the tenets of preservation in the nation's capital, and has recently highlighted the city's rich legacy of midcentury design. "Architectural history is a major part of the ethos of Washington, and the DC Preservation League (DCPL) has been a staunch and devoted steward of that history," said the jury. "The city's appearance today owes a great deal to DCPL's efforts in promoting solid preservation, architectural, and urban design principles."

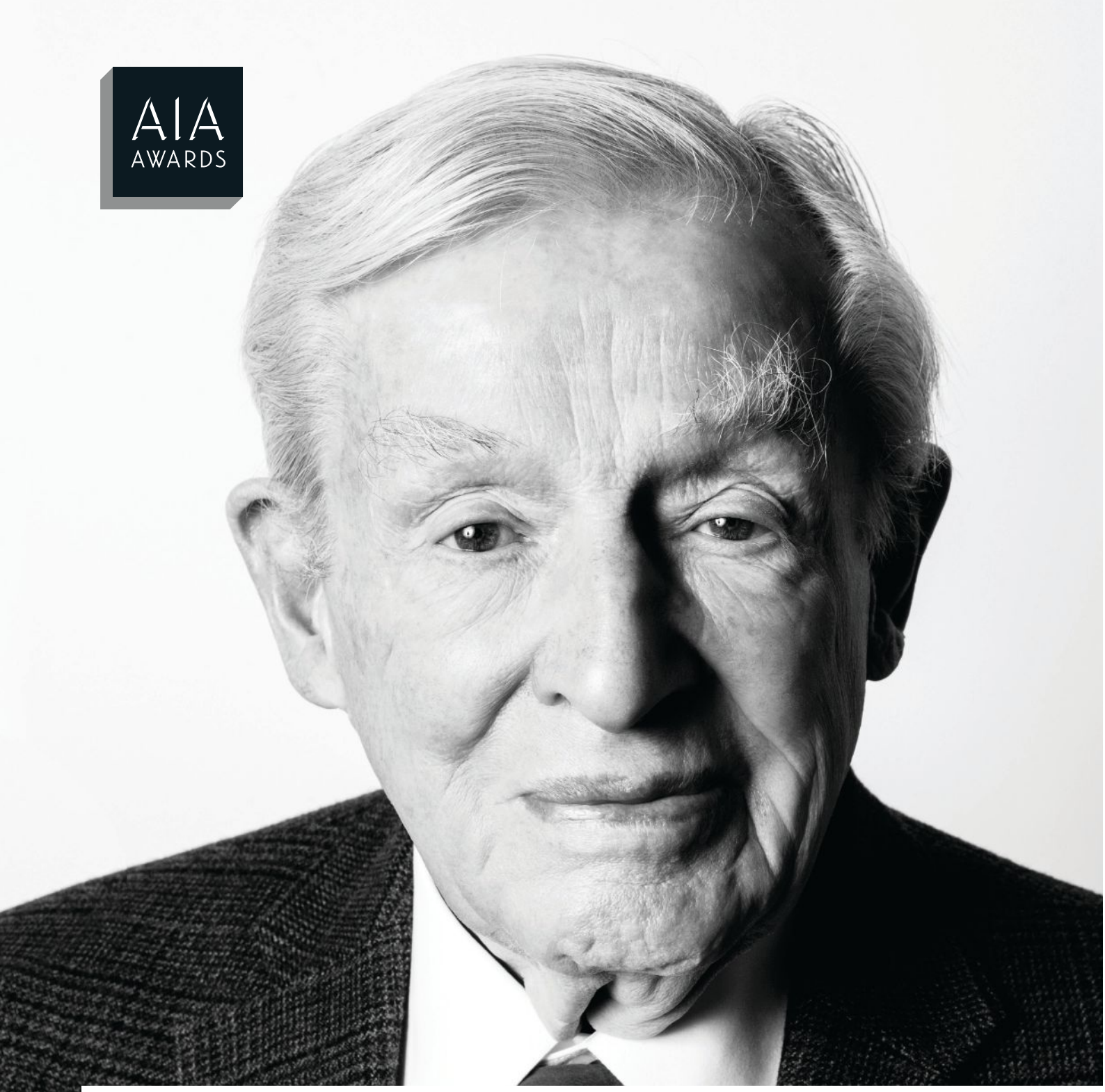
PHOTO BY NOAH KALINA; ILLUSTRATIONS BY PETER ARKLE

AIA AWARDS

THOMAS JEFFERSON AWARD

GINNIE COOPER, CHIEF LIBRARIAN AND EXECUTIVE DIRECTOR, DISTRICT OF COLUMBIA PUBLIC LIBRARY

The day after a fire gutted the Georgetown Public Library in Washington, D.C., Ginnie Cooper walked inside. "It was amazing to see that space, the light coming in," she says. Under her direction, local firm Martinez + Johnson transformed the interior from "a rabbit's warren of odd shelving" into a luminous, open plan. Since Cooper's arrival from the Brooklyn Public Library, in 2006, she has spearheaded three other historic restorations, as well as 10 tear-down renovations, including two by David Adjaye, Hon. FAIA. Next up, says Cooper, is an overhaul of the system's long-neglected central branch, the Mies-designed Martin Luther King Jr. Memorial Library. "Looking at it, I love it as I love the Seagram building," says Cooper, whose office is on the fourth floor. "I live in it, though, and I have to deal with the elevators, the asbestos, the heating, the single-pane windows." She sighs. "But I know we can make it a wonderful building." **A.H.**



AIA AWARDS

EDWARD C. KEMPER AWARD

JOHN D. ANDERSON, FAIA, ANDERSON MASON DALE ARCHITECTS

When he was 12, John Anderson re-created Center City, Philadelphia, block by block, out of ivory soap, and decided then to become an architect. Seventeen years later, after serving in the Naval Air Corps in World War II, he received his M.Arch. from Harvard's Graduate School of Design, when Walter Gropius was dean. "He had a masters studio of the best and the brightest," recalls Anderson. "I was not in that studio." Anderson later moved to Denver, where he founded Anderson Barker Rinker, which pioneered sustainable design. In 1972, the firm designed the world's largest solar-heated building, for Front Range Community College, in Westminster, Colo. "There weren't many people in the early years who believed in what we were doing," Anderson recalls. The project led to the firm's dissolution: "I wanted to keep going, and they thought we weren't going to make any money." The practice, revived as Anderson Mason Dale Architects, later redesigned the entrance to Mount Rushmore. Retired from his firm since 1998, Anderson served as the AIA's national president from 2000 to 2001. He bolstered the Institute's finances, established metrics to track the racial diversity of its membership, and, in the aftermath of Sept. 11th, flew to New York and created a fund for architects who had lost offices and projects in the attacks. **A.H.**

PHOTO BY NOAH KALINA

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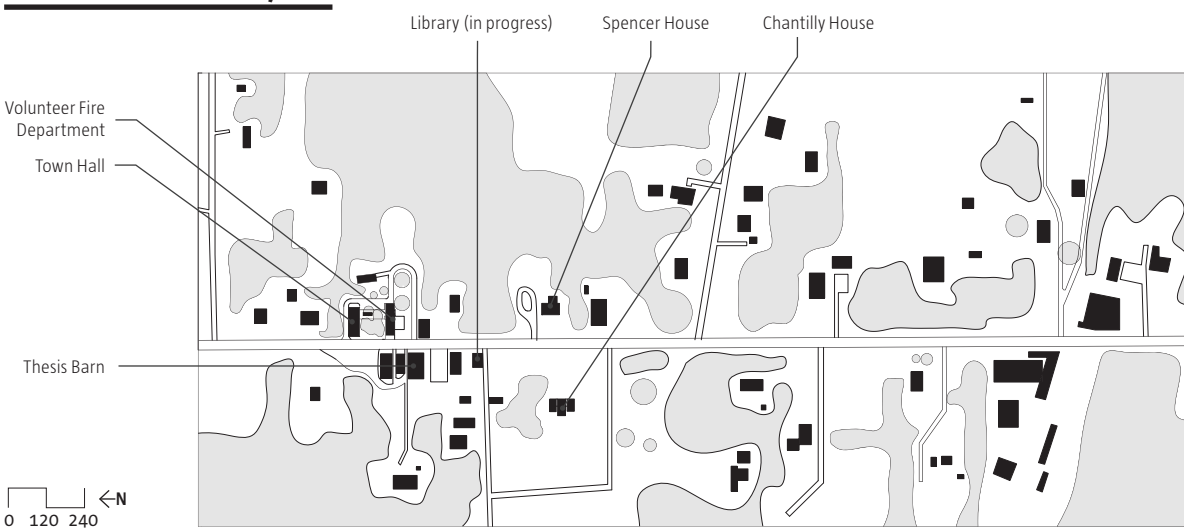
NEWBER
TOWN HALL · VOL

NEWBERN TOWN HALL

Previous Spread: Designed and built by Rural Studio students in Newbern, Ala., the town hall is built out of stacked timbers. Sourced locally, the cypress beams were squared at 8 inches by 8 inches and are held together with a ½-inch threaded rod. **Above:** The town hall forms a sort of town square in combination with the adjacent firehouse, which was completed in 2005.

Site Plan of Newbern, Ala.



WITH THE OPENING OF A NEW TOWN HALL, AUBURN UNIVERSITY'S RURAL STUDIO HAS COMPLETED A CIVIC CAMPUS, NEARLY A DECADE IN THE MAKING, FOR THE PROGRAM'S HOME BASE OF NEWBERN, ALA.

Text by **John Gendall**
Photos by **Tim Hursley**

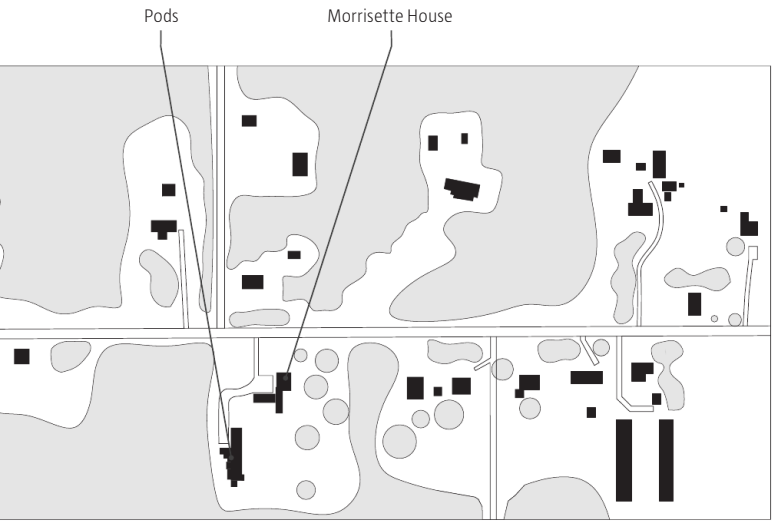
BEFORE CELEBRATING its 20th anniversary this fall, Auburn University's Rural Studio has a few more milestones to mark. In Newbern, Ala. (population: 186), where the program is based, the studio has undertaken a mission to create civic spaces for the community. This spring saw the opening of a new town hall, the genesis of which was an earlier Rural Studio project: an adjacent fire station that was completed in 2005. The station was meant to provide the volunteer fire department with classroom space and a garage for its trucks, and to double as the city council building. During meetings, so the thinking went, fire trucks would be pulled out from the garage, freeing up room for the town council to assemble. But in practice, the council often ended up meeting between the trucks in an interior that was hot in the summer and cold in the winter.

"It worked very well for fire trucks, but less well for human beings," concedes Andrew Freear, who has been the director of Rural Studio since 2002, and currently serves on ARCHITECT's editorial advisory board. Not one to be discouraged, though, he set his sights on designs for a new town hall. Designed and built by students David Frazier, Brett Bowers, Mallory Garrett, and Zane Morgan, the building provides space for council meetings and community gatherings. Linked to the fire station with a Rural Studio–designed courtyard, replete with a barbecue pit, the hall completes a new town square for Newbern. (A library is also under way on the other side of the road.)

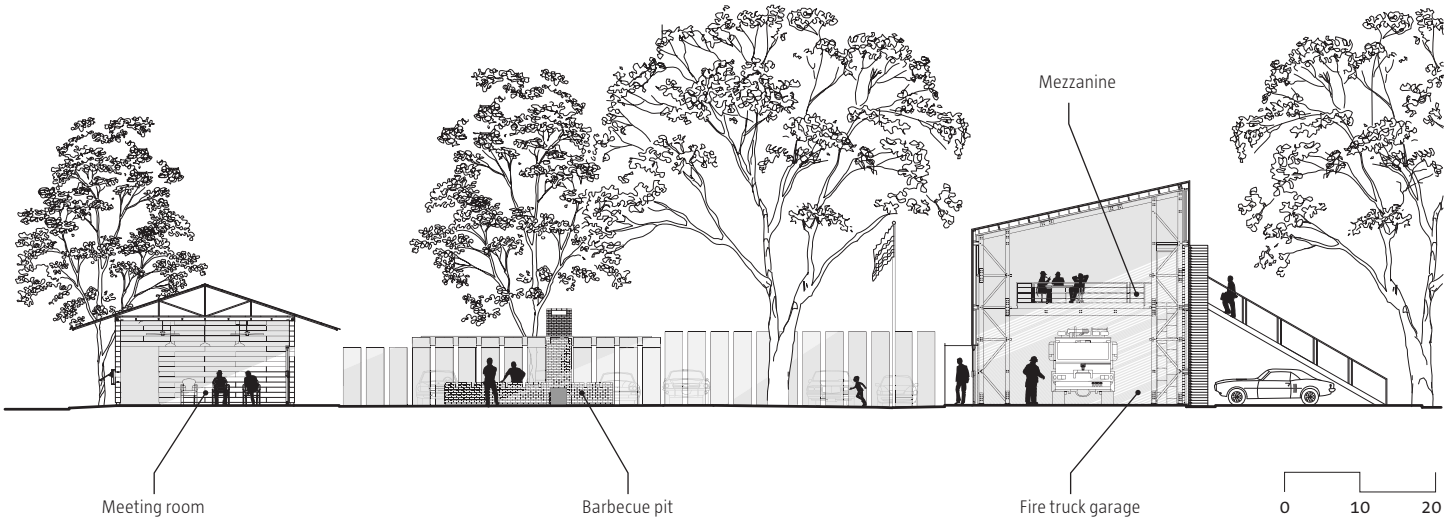
The designers set out to impart the town hall with civic stature, but they wanted to be sure not to compete with the firehouse, which has its own elegant presence. "After a lot of consideration," remembers Frazier, "we reasoned that the new building didn't have to compete with the fire station in scale, but that it could really achieve a presence through the material." Taking advantage of a local lumber industry, they determined that wood would be a cost- and energy-efficient choice, but worried that cladding a structural frame with timber would introduce added material cost, and would result in a flimsy-looking building. Instead, they devised a system of stacked cypress beams, eliminating the need for extraneous finishes and hardware, and giving the structure a certain gravitas.

"With the town hall, the students considered absolutely everything, from light fixtures to door handles. You name it, they designed it," Freear says. "The project really set a new level for Rural Studio." As the program celebrates its 20th anniversary, Freear is keeping his eyes on the future. Several key projects are slated to finish up over the next few months, including the Newbern library; a two-bedroom, $20,000 house; and the Lions Park Scouts building, in Greensboro, Ala.

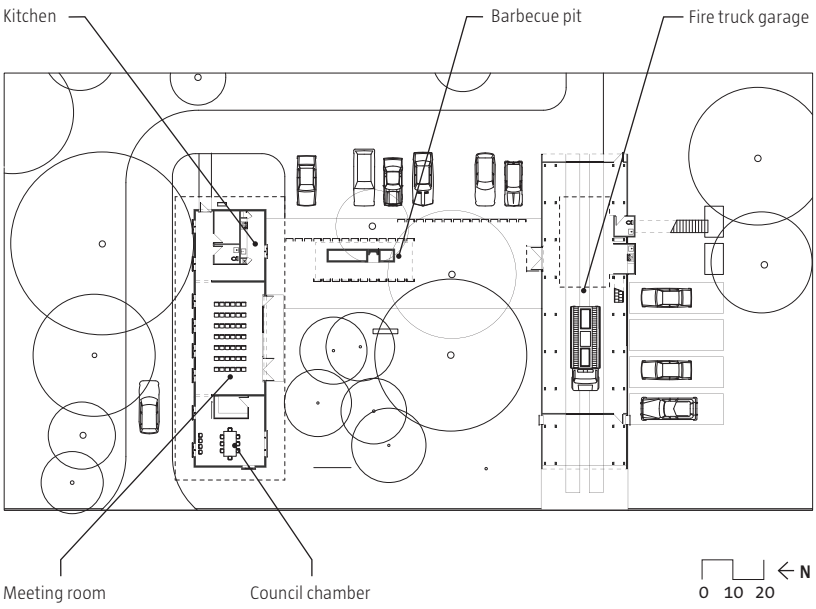
The town hall is already proving its civic worth. Freear reports that when the U.S. Postal Service was planning to cut hours, the building became a venue for concerned residents to discuss the changes. It's also been a successful pedagogical tool: "We were never told we couldn't do anything, but we were asked 'Why?' a lot," Frazier recalls. "If we could justify it, then we could go ahead, but if it just looked cool, we had to give it more."



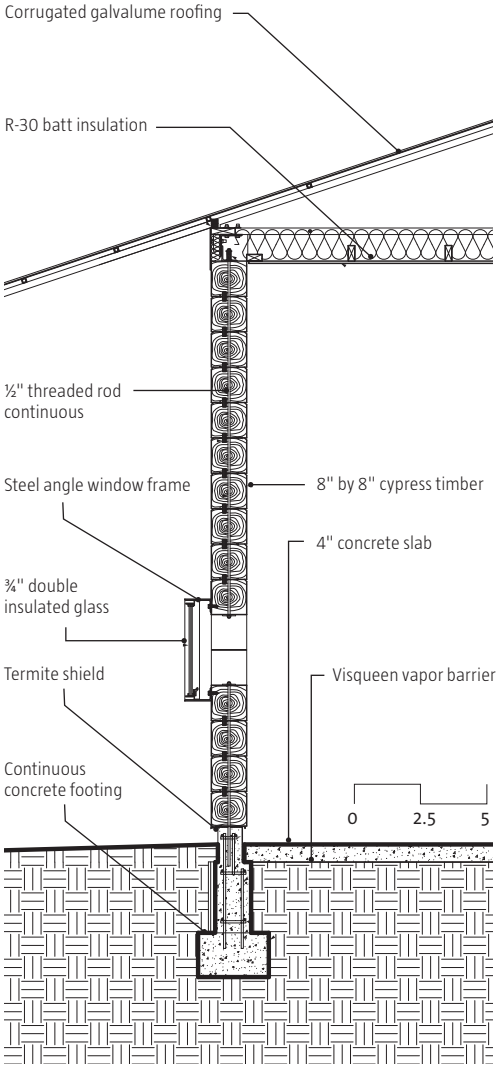
North–South Section



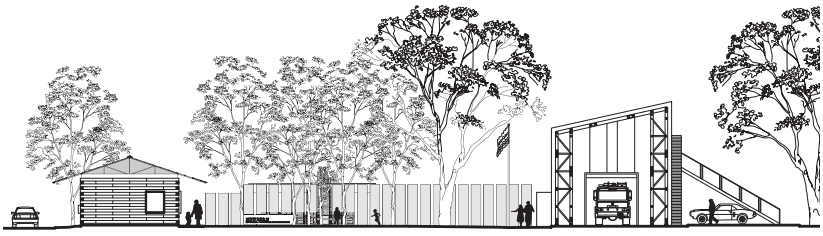
Ground-Floor Plan



Wall Section



West Elevation



Everything in the town hall, from the window frames to the roof trusses, was custom-designed by the students. So, "if you want the nuts and washers to be black, you can't just order black nuts and washers," student David Frazier says. "You have to actually paint each one." **Clockwise, from top:** The town hall includes a metal-framed barbecue pit, and together they form two sides of a new civic space in Newbern. At the center of the plan is a large, open meeting room that can be used for town gatherings or as a classroom. The facility's flexible design allows for multiple meeting configurations, from small private gatherings to larger assemblies that use the town hall, courtyard, and fire station, in tandem. The designers settled on cypress for the stacked timbers since it could be sourced locally and would eliminate the need for extraneous finishes; knowing that the timber may shrink over time, the students hung the windows and doors either fully inside or fully outside, allowing the wooden frame to shift relative to the glazed openings. The council chamber, which can be locked if the building is being used by residents, is at the west end of the building, closest to the street.

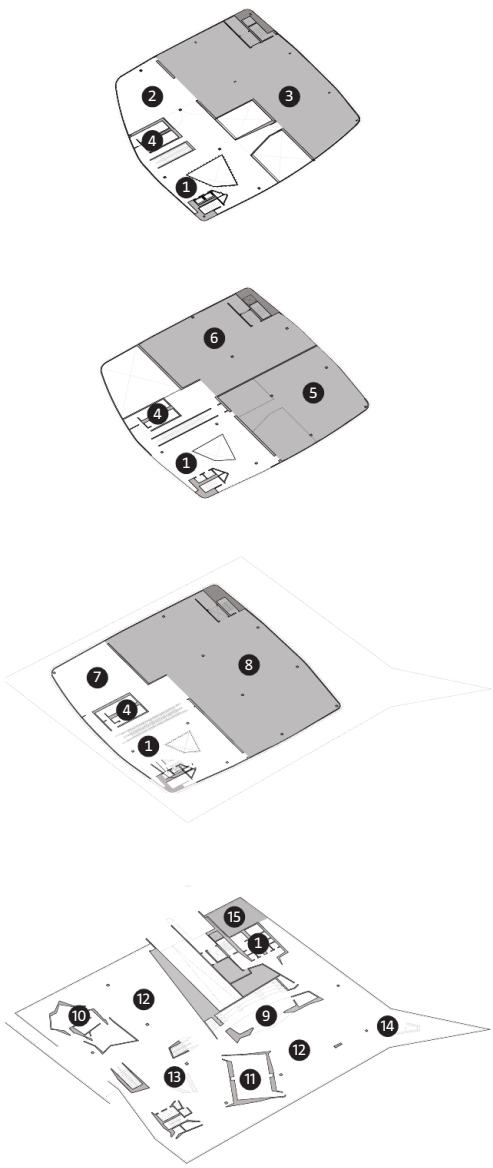
The new town square has become a gathering place for the residents of Newbern. Seen here from under the overhang of the town hall roof, residents gather in the barbecue pit that bridges the plaza between the town hall and the fire house. Across the street, the next Rural Studio project in Newbern is under way: a new library.

SAMSUNG MODEL HOME GALLERY

WITH THIS NEW HOUSING SHOWCASE IN SEOUL, SOUTH KOREA, NADER TEHRANI OF BOSTON-BASED NADAAA DISCOVERED THAT WHEN YOU CAN'T CONTROL THE TRANSLATION FROM DESIGN TO CONSTRUCTION, YOU DESIGN FOR WHAT YOU CAN MAKE FOOLPROOF.

Previous Spread: The gallery has to do more than showcase model apartments, it also serves as a civic structure, with a plaza to attract area residents. **This image:** The first floor is a transparent base that invites people in; the upper levels house showrooms and are largely windowless. **Bottom:** The rounded form of the upper volume is clad in louvers to mask imperfections in the construction of the metal skin.

Axonometric Plan Diagram



1. Waiting area
2. Promotion hall
3. B2B unit showroom
4. Restrooms
5. Design factory
6. B2C unit showroom-2
7. Contract and consulting room
8. B2C unit showroom-1
9. Auditorium
10. VIP room
11. Multifunction room
12. Gallery
13. Information
14. Café
15. Offices

Interview by **Ian Volner**
Photos by **John Horner**

Given that the purpose of the gallery is to sell apartments, did you research the residential mindset of the Korean consumer marketplace?
Nader Tehrani: Absolutely. The research we did was, on one level, exhaustive, but also lost in translation almost constantly. So I can only say with humility that we always try to do our best.

Part of the research was done through interviews with architects who had done these galleries before, and with architects who understand the cultural mindset. The other part was a tour of a dozen or so of these model home galleries, not just Samsung's, trying to understand their organizations and the way in which these apartments are sold.

These apartment homes are in towers that, in the Western world, have come to be associated with social housing. In Korea, they're a status symbol, and the consumer's level of expectation is actually quite high.

And your design reflects some of these expectations spatially?
Our design is a stage set. At one level, our design targets the inability to control the construction process the way we do in the West, which is by working drawings that are monitored weekly on site. We undertook this job by developing four details for the things that became of paramount importance, not only to them, but for us to control.

What are those four details, and why did you select them?
One is a public ground that emerges from the park into the building and out onto the sidewalk. The second is a ceiling that contains all of the building's systems, and becomes the envelope for the columns, staircases, and VIP rooms on the ground floor. The third is a skin that envelops the base to make it transparent and to make it well protected against the sun; it's a steel structural system that is supporting the edge of the building, it's the mullions and fritting, and it's a vertical barcoding system that is a kind of wrapper. The fourth is a skin for the black box atop the transparent base, which is a foil for the lack of tolerance in the construction system for a compound curved surface. The louvers are not there for sun protection, as there are very few windows; they are there as a foil for the imperfections of the skin behind them, since they were unwilling to build it through digital manufacturing processes—and as such they would have telegraphed all of the imperfections onto the skin.

I was trying to do damage control more than anything. I don't think they got our geometries right, to be honest. But they were easy to fix because we gave them parameters of which intersections were imperative to meet and which were not.

How were these requirements communicated?
We did 80 WebEx's and Skype calls, so we saw each other's screens and we worked directly with each other's lines. That is an interactive model of collaboration that works quite well. We made trips with my team to Korea, and they also came here. The design period was not much longer than six months, nor was construction, and that's with transitional periods of one or two months where there were either silences or things that were happening in preparation. So we're talking about quite intensive charrettes.

These silences included not telling you about the start of construction?
We submitted our drawings and we didn't hear from them for two months. I sent an email asking about the status, and we got an image of our project that was well-framed, and they said: "We're having some issues with the rounding of the corners. Could we consult with you?"

I wasn't shocked, because I've been around the block a few times. But I was touched that they called me because it meant we could actually follow up on some of the experiments we were doing. So we re-entered the project after a couple months of construction administration.

The team we started with was still there, but added to that was a set of engineers who drove the motors of the construction site. At that moment everything that you're talking about, everything you've drawn, either becomes irrelevant or becomes the exact thing they'll build. It comes down to your ability to be able to communicate that on site. That happens with some level of translation, and some level of drinking, and rolling up your sleeves and working with them.

I'm sorry, did you say drinking?
Eating and drinking is a central part of Korean culture. If you cannot drink, you're not going to survive it. All I can say, on a very personal note, is that if I had not fallen in love with Korea and its culture a long time ago, I'm not sure I would've survived the process, because I'm not much of a drinker. But I love the people, and I love working there.

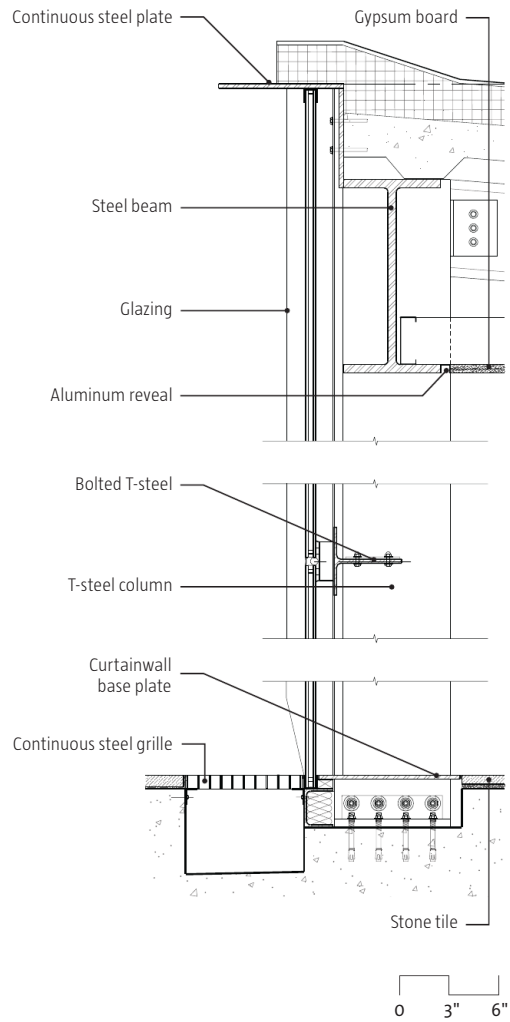
Is the process that you developed of working from parameters something you can see being applied broadly in similar scenarios?
I think this is a new and emerging challenge for all of us. The scale of projects is no longer the dimension of a building, it's a block, or two blocks, or a megablock, so you can't design everything bespoke. You have to design systems and frameworks for decisions to be made that are often going to be shared.

Also, the speed at which buildings are built now around the world requires 24-hour construction sites. That means that you need to be prepared to give up certain things because you're not going to specify in detail every drawing to every mullion. So you develop systems that respond to those conditions. I think this is quite effective on many cultural fronts; the construction industry has changed a lot over the last 20 years.

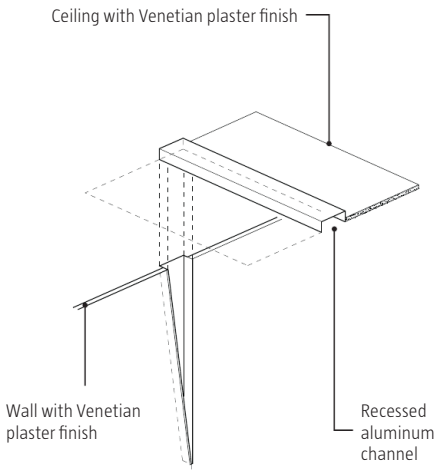
How does this fit into the scope of how you thought architecture worked?
As much as we have pre-existing aesthetic notions about what is beautiful, what is proportionally correct, and what looks right, this challenges all of those. Effectively, I'm not ready to tell you this is a beautiful project. It operates within the tradition of the folly, or the grotesque landscapes of some of these follies, because it challenges normative notions of beauty, not just the ones that the public has, but that even architects have. You can't always control the outcome in exactly the way you would compose them. It defies your compositional sensibilities and forces you to reconcile your systemic thinking with your aesthetic thinking.

How did this project challenge your notions of your own architecture?
Given the kind of ambitions that I've had and that I continue to have, to design buildings with syntactic precision and the development of a vocabulary that is quite precise, it takes a learning curve to know where to maintain an arm's length from your own authorship. It was a huge lesson that required me to rediscipline myself according to a very different set of cultural requirements—basically not to be myself.

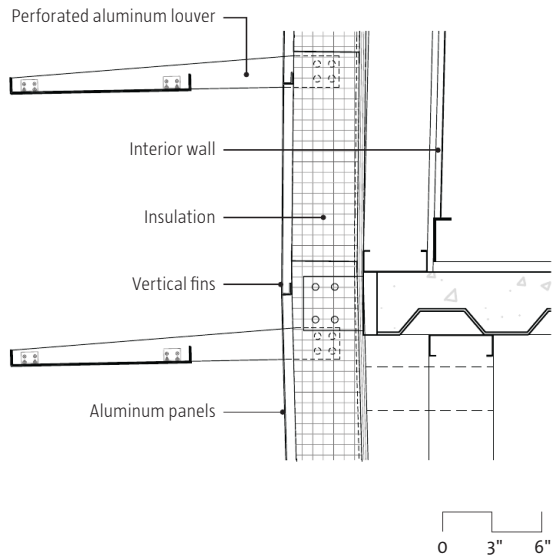
Façade and Floor Detail



Ceiling Diagram



Louver Detail



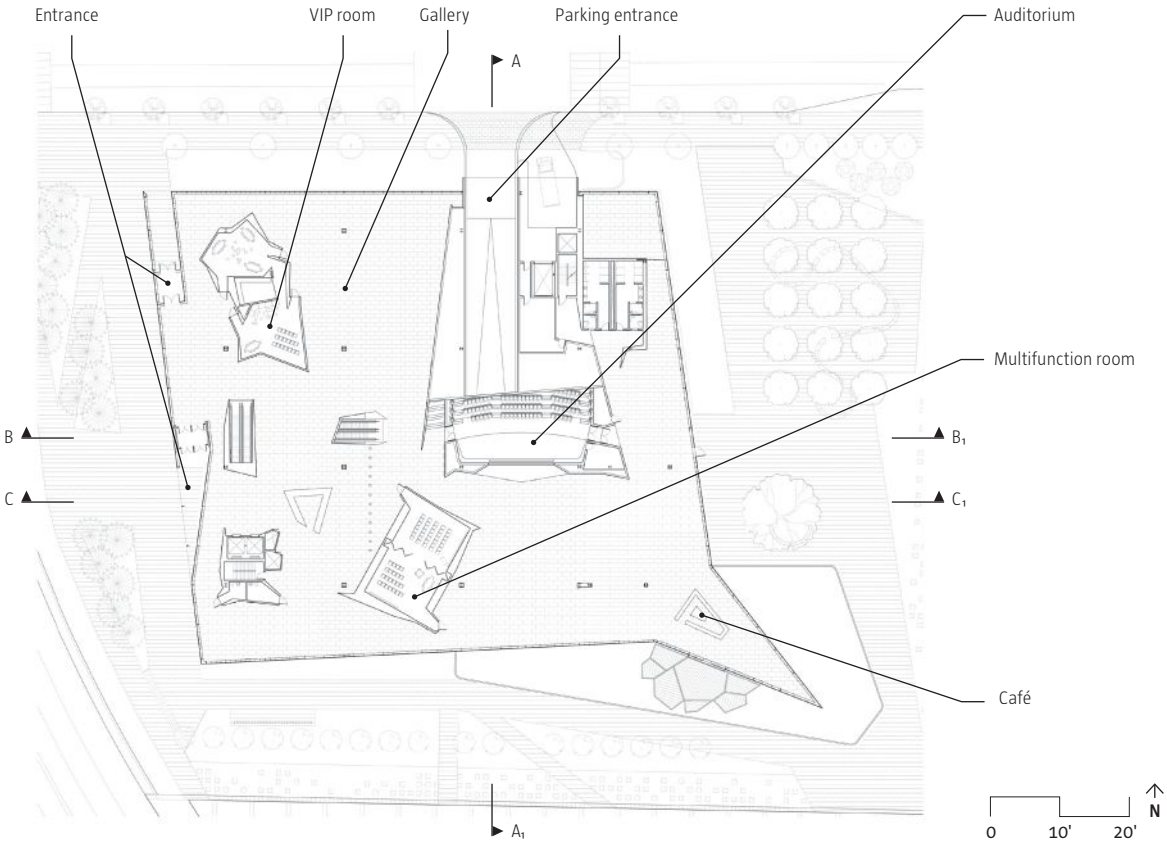
Opposite: A ground-floor auditorium is used for presentations by Samsung and for public events. **Above:** The southern end of the building comes to a sharp point that houses seating for a café. The bases of the steel mullions are covered by river rocks to mask imperfections in the construction, and to mark the transition from outside to inside.

The ground floor of the Model Home Gallery showcases the ceiling detail designed by NADAAA. Black-painted channels inscribed in the ceiling plane (which consists of white Venetian plaster on gypsum board) house systems, including lighting, sprinklers, and HVAC.

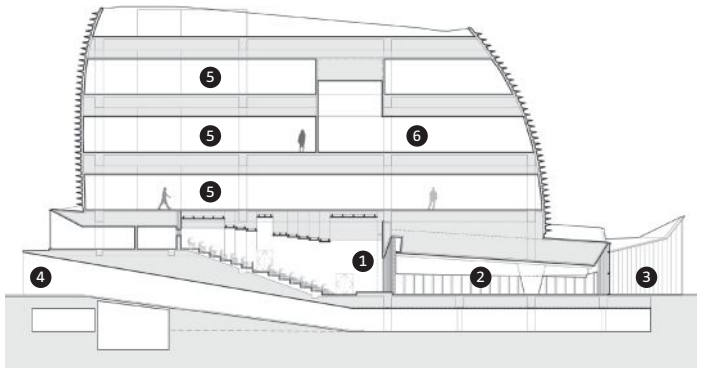
B1
^3

A skylit atrium extends through the building, terminating in an articulated aperture over a seating area in the ground-floor gallery.

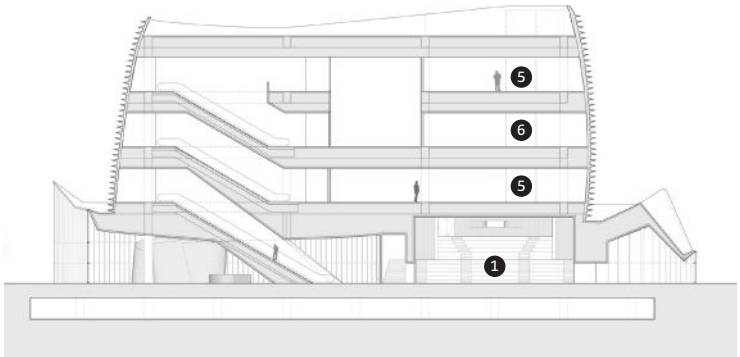
Ground-Floor Plan



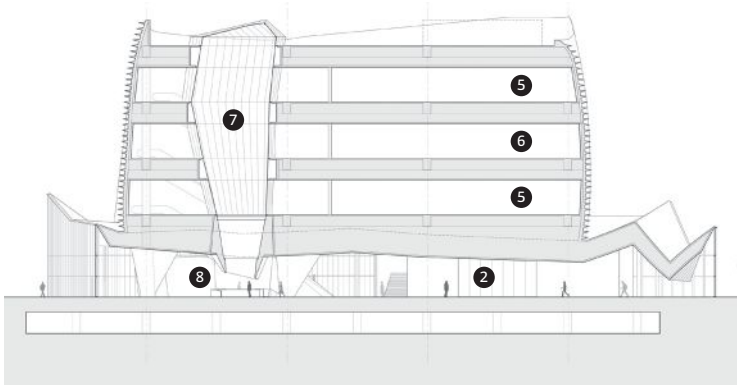
Section A–A₁



Section B–B₁



Section C–C₁



1. Auditorium
2. Gallery
3. Café
4. Parking entrance
5. Showroom
6. Design factory
7. Skylight
8. Info desk

The ground floor forms a sort of hypostyle hall, with the articulated ceiling plane extending to the ground to encase columns, elevators, and escalators. The stone tiles that line the space are part of the flooring detail system designed by NADAAA, which aims to continue the exterior plaza into the building.

BAUSCH + LOMB HEADQUARTERS

EMERGING FIRMS 137KILO ARCHITECTS AND BEZA PROJEKT CREATE AN OPEN-PLAN OFFICE—THE LIKES OF WHICH WARSAW HAS NEVER SEEN.

Text by **Richard Ingersoll**
Photos by **Jacek Kołodziejski**

Upon entering the Warsaw offices of Bausch + Lomb, visitors are confronted by the sight of a vegetal mosaic composed of ferns, orchids, and broad-leafed tropical flora. It's hardly the first such green wall—today a commonplace, eco-friendly concept, it was first introduced 20 years ago by the French botanist Patrick Blanc—but no one has seen such a sensitive feature in a Polish office building before. Nor has anyone encountered a receptionist framed in a half-shell made of an inflated vinyl cushion. These are among the many playful devices created by Polish firms 137kilo Architects and Beza Projekt that signal a change in sensibility in a city better known for its toughness.

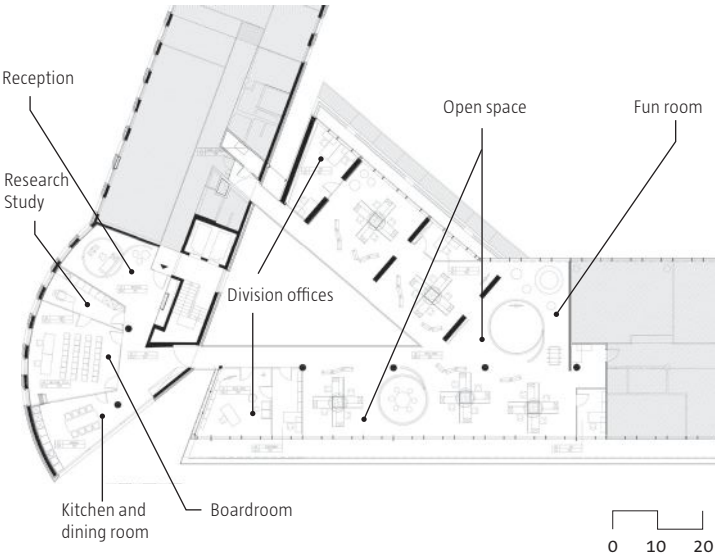
Warsaw lost 85 percent of its buildings and 200,000 inhabitants toward the end of World War II, to be followed by four decades of drab settings created by a communist regime. Since democracy took hold in 1989, the city has awakened to consumer capitalism, with its excesses of advertising and glitz—most tellingly, the Communist Party Headquarters was acquired by the stock exchange, then became a Ferrari dealership, and now boasts garish billboards. The Bausch + Lomb office pursues a different tack, emphasizing the quality of one's experience rather than imagery.

The company "wanted to supply a new, healthy vision for our office, making it a place of creative interaction," says Marta Wielondek, country manager of Bausch + Lomb in Poland. "We were certain that the young designers we chose from a limited competition were the only ones who could translate our goals into reality." The headquarters is one of the first completed projects by 137kilo Architects, whose 33-year-old principal, Jan Sukiennik, collaborated with the designers of Beza Projekt. (The two firms are intimately linked—Sukiennik is married to one of the partners of Beza.) He admits that their team would never have been able to work so creatively without the encouragement of Wielondek, who, for example, requested to install a swing and a park bench in her office to put people at ease.

Starting with the brief for an open-plan scheme, the architect eliminated all of the non-load-bearing walls on the top floor of a prime office building designed by Marek Swierczynski in the mid-1990s, tearing out the hung ceiling to expose snarls of HVAC and wiring, which were then spray-painted white. They conceived the workspaces as clusters of four desks set in a cruciform pattern (which also happens to trace the company's logo), placing a ficus tree at each crux. Transparent glass partitions enclose the conference room and the offices of Wielondek and her assistant, and thus the entire team, except the accountant, remain in full view. Sukiennik and his team devised a series of nomadic solutions for the material and social needs of the office, including two oval bubbles that can be used as consultation rooms or retreat areas. Reminiscent of the inflatables from 1970s counterculture (think Haus-Rucker-Co or Ant Farm), each semitransparent shell, made from two layers of vinyl with a 20-centimeter air pocket in between, is pitched like a tent over steel hoops. The lenslike quality of the

Previous Spread: A green wall–lined exam room allows the staff to perform ophthalmological tests within the confines of their new office space. **Top:** The pine-slat reception desk is encased in an inflated vinyl bubble. **Bottom:** The fifth-floor atrium of the base building offers a panoramic view of the open-plan office, including the two additional bubbles that are used as conference space.

Floor Plan



forms, which intimates the company's principal product of contact lenses, comes from the regularly placed disks which are used to anchor internal white cords that bind the outside layer of vinyl to the inside layer, similar to the structure of a mattress. The inflatables were first thought of for their ease of assembly, and in addition offer the potential to be easily moved.

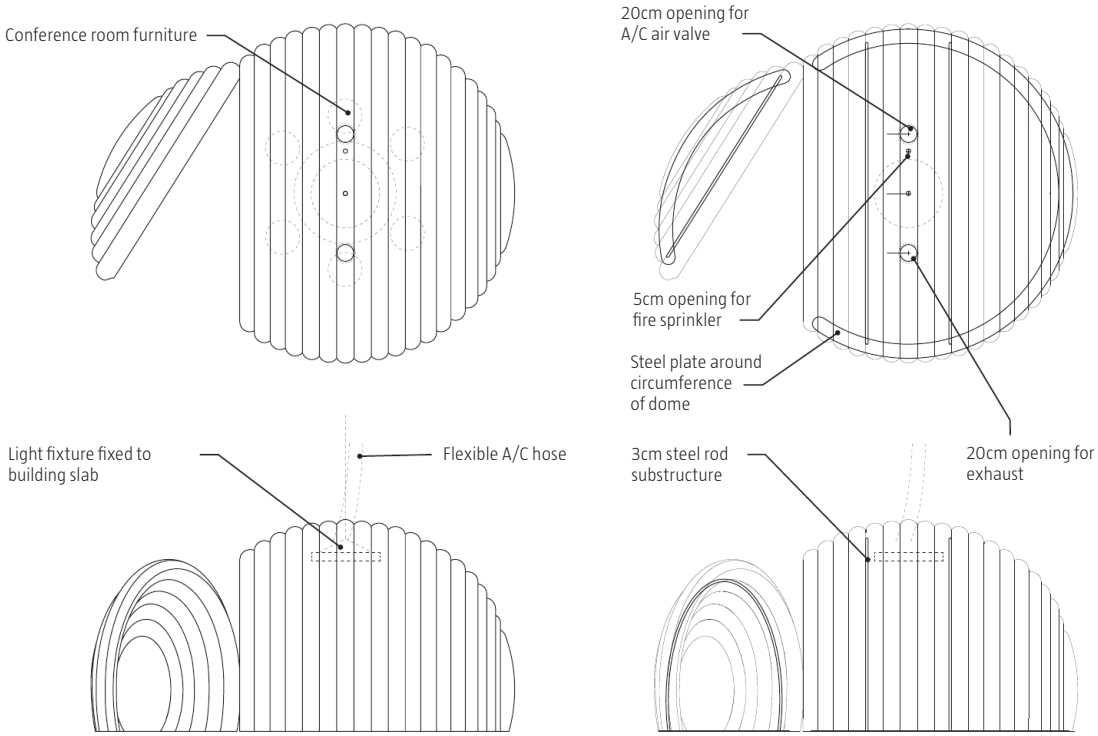
Other features include custom-made crates, inspired by those used for storing apples, and vertical space dividers that resemble the wooden pallets used for transporting goods in warehouses. The designers tipped the crates on their sides and attached them in staggered patterns to one of the walls to serve as shelving for the office's library. The vertical flats, which are constructed from blanched pine stakes, can be used for hanging coats, or they can be rolled into place to serve as a privacy partition.

Currently the open-plan office is enjoying a revival due to the Google generation who seeks ever-more flexible workspaces (see the Google offices in Tel Aviv and London). The earlier versions of this phenomenon, perhaps first seen in Frank Lloyd Wright's 1904 Larkin Building in Buffalo, N.Y., had clear panoptic intentions for surveying workers; more recent versions appeal to office democracy and coworking. And despite the openness, the Bausch + Lomb offices still provide the employees with places to remove or even shelter themselves. One such space, known as 'the fun room,' has a foosball table and a round couch surrounded by a tall upholstered parapet where office workers can discretely take (sanctioned) catnaps. Another flexible space is the kitchen—not a tiny counter for making coffee, but a full kitchen with lots of storage and a large dining table with 12 wooden chairs. "We like the creative feeling that comes from the kitchen," Wielondek explains, "and it really brings us all together in casual ways."

The entire office has superb daylighting and spectacular views to the nearby St. Alexander's Church and, in the distance, the immense Palace of Culture and Science, Stalin's skyscraper "gift" to Poland, which was completed in 1955. Surrounding it is the chaotic addition of new high-rise structures in glass wrappings, each competing with the next for image recognition. The cockeyed Złota 44 tower, designed by Daniel Libeskind, AIA, is a vindication of his heritage, and offers a prime example of style over comfort. But Sukiennik's wife, Zofia Strumiłło-Sukiennik, summed up the difference in their design approach: "Our generation is the first in a long time to be free, but we often don't know what real freedom is, and remain content with the so-called pleasures of consumer culture," she says. "In our projects, we are seeking something that goes beyond imagery, that offers a quality that will enable people to make their own freedom."

Above: Even the closed spaces in the offices promote transparency: The conference room, which is one of the few enclosed spaces in the floor plan, features glass walls that can be closed off by opaque curtains. The kitchen, a central gathering space in the offices, sits just beyond. **Opposite:** The two conference pods in the space are made out of inflated vinyl, and are designed for flexible use as break-out space for the Bausch + Lomb employees.

Dome Details



EXPLORATORIUM

EHDD REIMAGINES A PAIR OF HISTORIC PIERS FOR SAN FRANCISCO'S MOST HANDS-ON MUSEUM AND THE CITY'S NEXT GENERATION OF SCIENCE GEEKS.

Text by **Katie Gerfen**
Photos by **Bruce Damonte**

ASK ANY SAN FRANCISCO schoolchild to name their favorite field trip of the year, and it's a safe bet that they will cite the most hands-on museum in town: the Exploratorium. Until recently, that trip entailed piling on a bus and entering the cavernous expanse of the Palace of Fine Arts—a Roman- and Greek-inspired folly, originally designed by Bernard Maybeck for the 1915 Panama–Pacific Exposition. The visits were made all the better by the fact that the classical architecture gave way to a veritable playland of exhibits: static generators that made your hair stand on end; Alice-in-Wonderland-esque rooms that seemed to grow smaller; and cow-eye dissections carried out for groups of slightly horrified kids every few hours.

But, over time, the landmark space proved something of a liability: The institution was forced to limit the growth of its continuing education and teacher training programs due to lack of space. "The facility wasn't working—we would have had to cannibalize ourselves," says Dennis Bartels, the Exploratorium's executive director.

The institution's board began talking as early as 1991 about renovating or relocating to another site in the city, and, in 1998, they retained local firm EHDD and lead designer Marc L'Italien, FAIA. Once relocation seemed certain, the goal was to find a larger, more accessible space. But it wasn't until 2004, when the city offered them another set of architectural icons—piers 15 and 17 on the historic waterfront—that they found a site that suited all of their needs: "When people saw this old, empty, industrial pier, it was like seeing the Exploratorium all over again," Bartels says.

The new 9-acre campus is nearly five times the size of the old facility, and it opens onto the Embarcadero, which boasts a streetcar and access to several bus lines. EHDD renovated the existing Pier 15 shed building into a massive exhibition hall; nearly the length of three football fields, the interior can accommodate all of the existing displays and then some. In a stark contrast to the windowless Palace of Fine Arts, natural daylight pours through clerestories that run the length of the shed. A second floor, in the form of built-out bridges that cross the width of the space, is now home to the institution's offices, as well as continuing education classrooms.

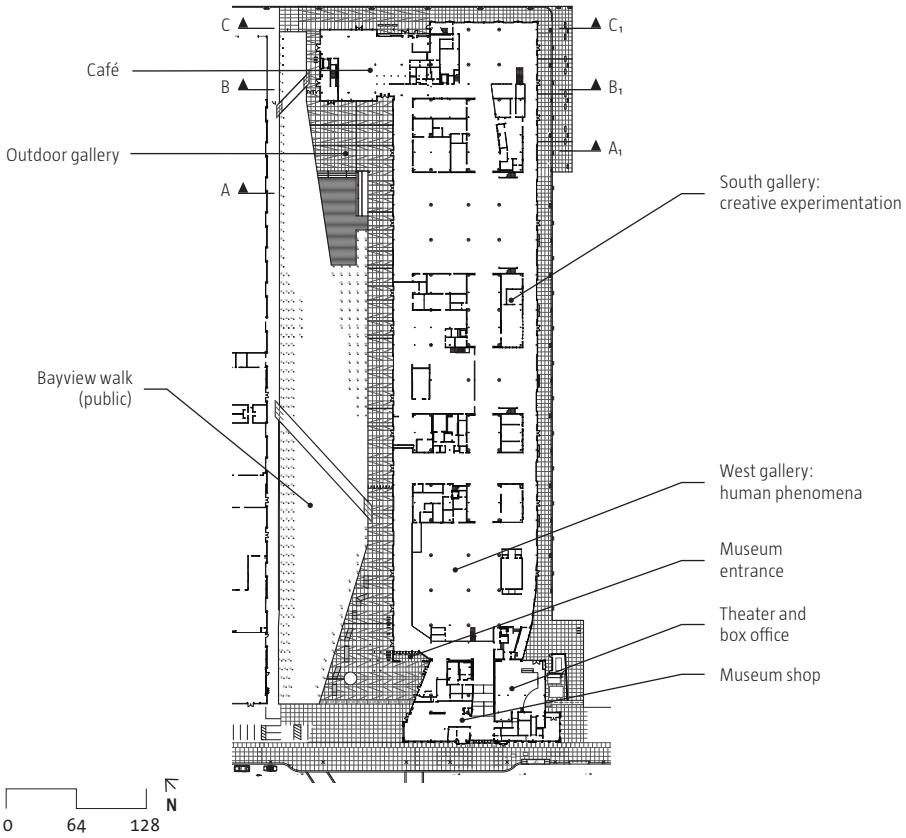
Outside, a 1.5-acre public plaza plays host to a series of outdoor exhibitions—including a fog bridge by Japanese artist Fujiko Nakaya that mimics the city's signature weather—with a further half-acre of outdoor exhibits accessible to ticketed visitors. The plaza creates an active urban environment that the old site sorely lacked. "This was the juice of the project," L'Italien says. "They are getting a much more public presence on the new site and a level of visibility they had never had." The historic Pier 15 bulkhead had to remain untouched, so the outdoor exhibits "create the marquee," L'Italien explains. "You come upon it and you think 'I gotta see this!'"

Anchoring the end of Pier 15 is the only new structure on the campus: a two-story glass box that holds a publicly accessible restaurant at ground-level, and a bay observatory on the upper level. This waterfront gallery is a showcase for a series of exhibits focusing on the surrounding ecosystems. "For 40 years, we've been taking Mother Nature and shrinking her to tabletop size," Bartels says. "Now, we get to go outside and play with her."

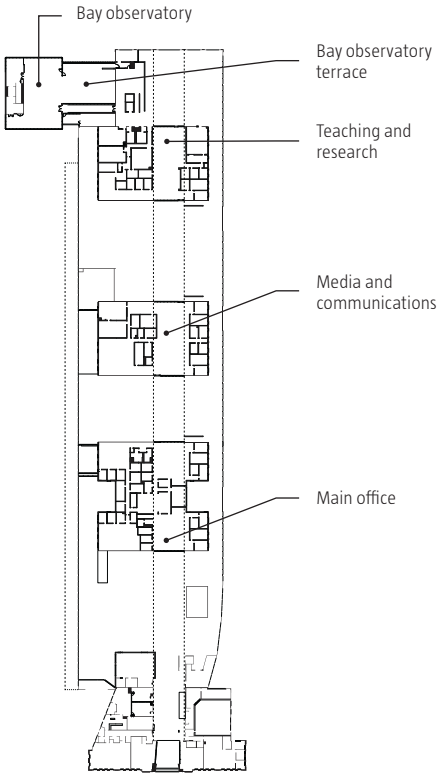
The process of constructing the new facility was akin to an Exploratorium exhibit in and of itself. Many community members saw rehabbing one of the decrepit pier buildings as "an absolutely ridiculous thing to do," says the client's project director Kristina Woolsey. "You need to be a dreamer, and you need to have an uncanny sense of survivability." Pier 15 was originally constructed in 1914, and rebuilt in 1930, but the wooden structure underneath had been largely untouched. The team employed

Previous Spread: The new aluminum-panel-clad entrance to the Exploratorium on Pier 15 in San Francisco. **This image:** EHDD transformed the historic pier shed and added a glazed pavilion at the pier's edge. Solar panels line the roof as part of the building's net-zero-energy strategy. **Bottom:** A new public plaza between the museum on Pier 15 and neighboring Pier 17 (which will be transformed into workshops for the institution) is filled with outdoor exhibits, including a fog bridge.

First-Floor Plan



Second-Floor Plan



PIER 15

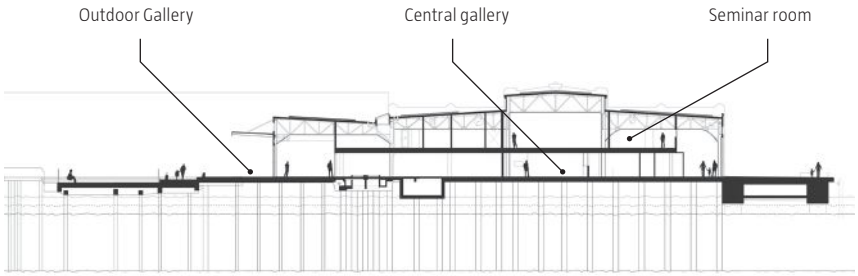
divers to repair nearly 1,200 of the pilings that support Pier 15, and build a series of 30 steel mega-piles to offer further bracing. EHDD also removed decking between the two piers, restoring the original two-finger layout while leaving some of the original wooden pilings in place to serve as anchors for outdoor exhibits. Once the under-pier structure was shored up, a new 8-inch concrete slab was placed on top of the existing pier slab. The structure is now so sound that L'Italien says, "If there's an earthquake, you really want to be at the Exploratorium."

Adding another layer of complexity to the renovation of the drafty shed was an early goal to make the new facility net-zero. The new slab is embedded with more than 40 miles of plastic tubing for radiant heating and cooling systems. Fresh air is brought into the structure through a series of overhead ducts, and the roof is outfitted with a 1.3-megawatt photovoltaic array. Current projections show that the Exploratorium is on target to meet its energy goals. "But you don't just hand over the keys and have it be net-zero," L'Italien says, noting that the systems will continue to be fine-tuned to ensure that energy consumption doesn't exceed production.

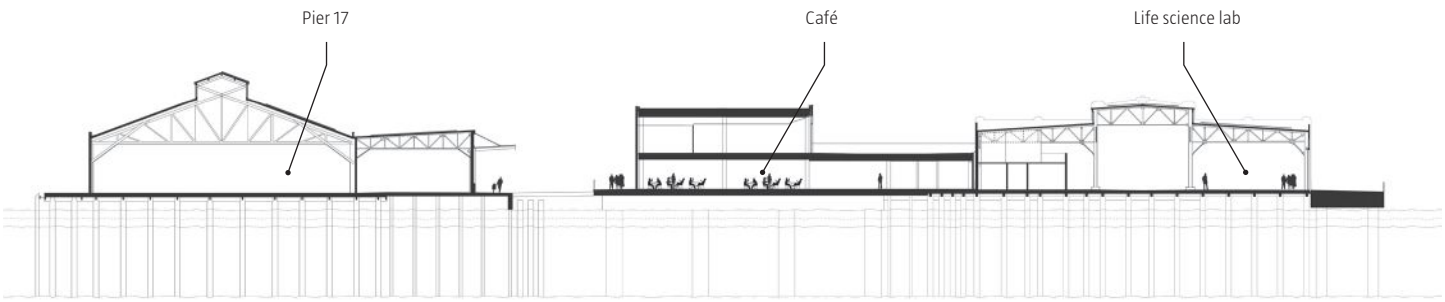
For now, EHDD and the Exploratorium are basking in the early signs of success: Since the waterfront facility opened in April, the number of visitors has increased by 400 percent, and school buses filled with the next generation of San Francisco science enthusiasts are lining up out front. "There were a number of skeptics along the way who didn't really think it was possible to get beyond the Palace of Fine Arts," L'Italien says. "But as soon as they got occupancy of the new facility, they didn't look back."

The new Bay Observatory at the end of Pier 15 is a two-story, glazed structure that incorporates a restaurant on the ground floor and exhibit space on the top floor (seen here). A terrace connects to the main exhibit hall on Pier 15. The guardrail is inscribed with a pattern derived from phytoplankton native to the local ecosystem.

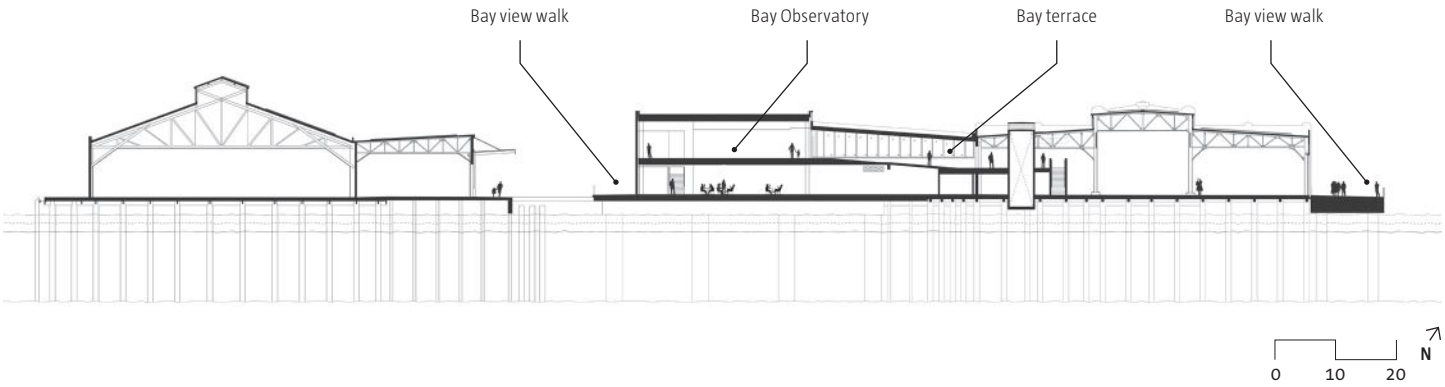
Section A–A₁

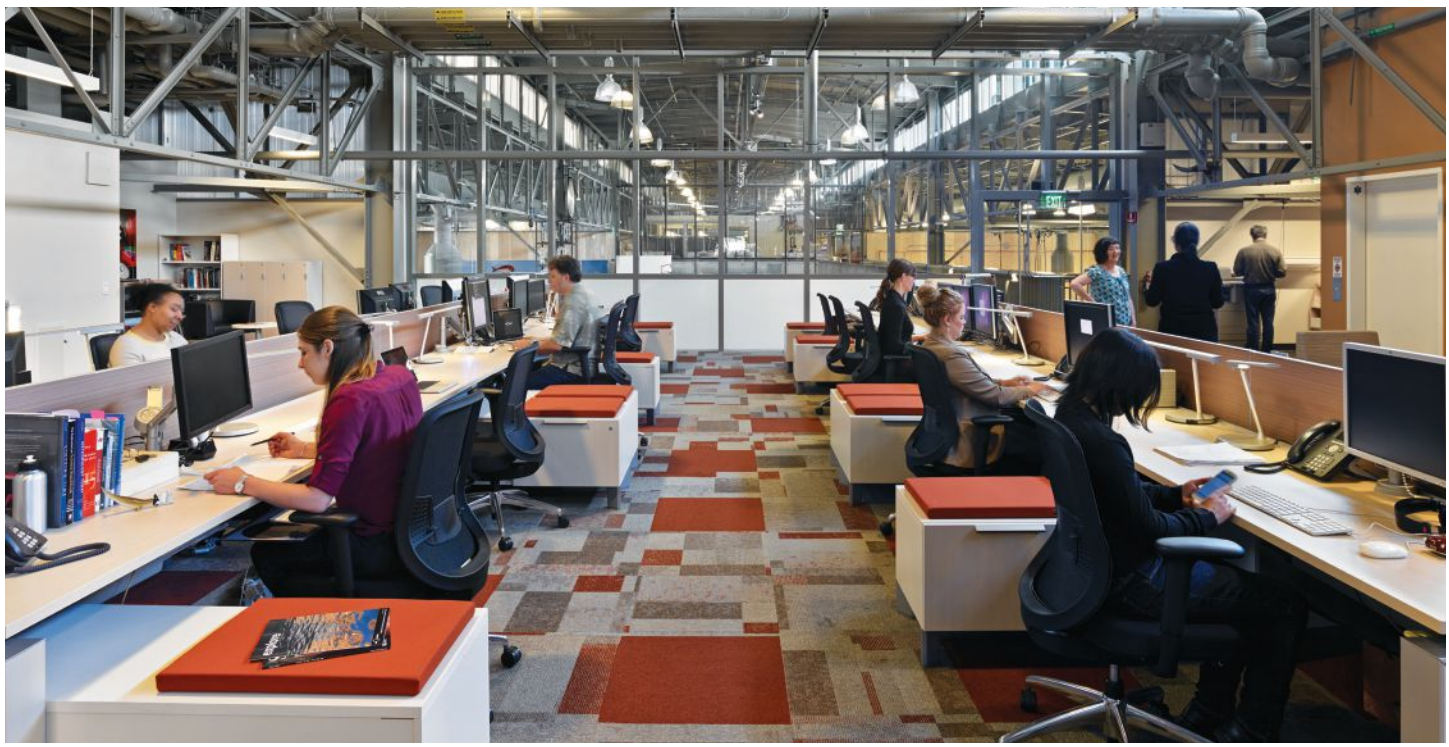


Section B–B₁



Section C–C₁




EXIT

Above: The Exploratorium lobby and ticketing area opens into the main exhibition hall on Pier 15. **Opposite top:** While much of the exhibit space is lit by clerestory windows that run the length of the shed, some exhibits required a more controlled level of light, and were strategically located in darker areas of the exhibit floor. **Opposite bottom:** Staff offices are accommodated in glazed bridges that span the exhibit space, such as the one seen from the lobby, offering employees views out over the exhibit floor. Classrooms are also located on this level.

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V6
EXIT
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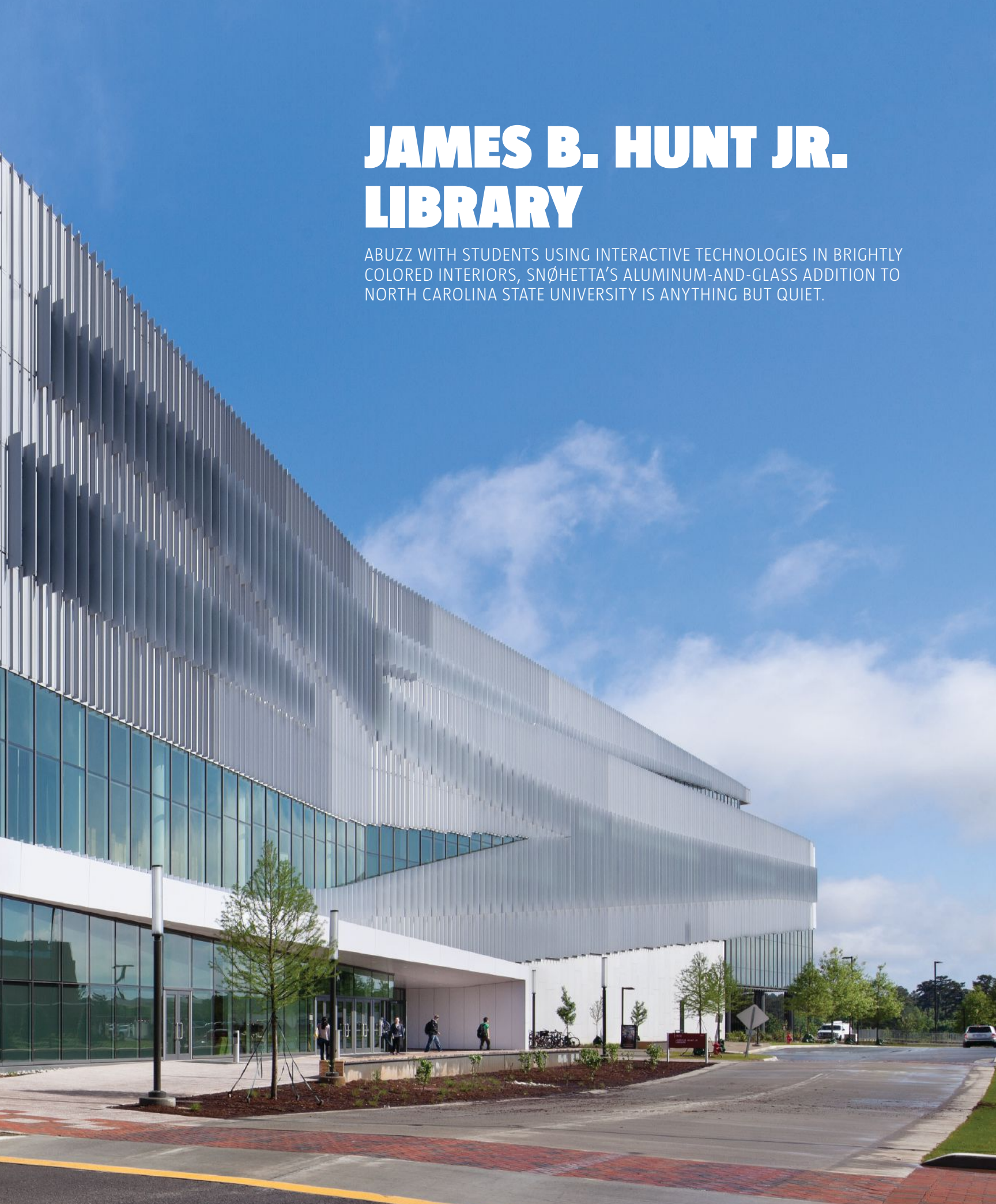
Nearly all of the institution's existing exhibits made the move to the renovated double-height shed on Pier 15. Large windows on the far northeastern end of the pier offer spectacular views out to the bay.

JAMES B. HUNT JR. LIBRARY

ABUZZ WITH STUDENTS USING INTERACTIVE TECHNOLOGIES IN BRIGHTLY COLORED INTERIORS, SNØHETTA'S ALUMINUM-AND-GLASS ADDITION TO NORTH CAROLINA STATE UNIVERSITY IS ANYTHING BUT QUIET.



Text by **Deane Madsen**
Photos by **Michael Moran**

WITH THE EXCEPTION of parking structures—and one or two brutalist buildings from the 1960s and '70s—the North Carolina State University (NC State) campus in Raleigh is dominated by brick buildings in neo-Georgian style. But the latest addition to campus—Snøhetta's glazed and louver-clad James B. Hunt Jr. Library—brings something different to the landscape, both in color and in content.

The five-story bent rectangle of the Hunt Library peeks above the red masonry structures of NC State, providing students with a gathering place on the southern side of campus while also doubling the university library's capacity. Although colors permeate the library's interiors, its façades—fritted glass on the north and south elevations, and glass-and-aluminum along the east and west—trend toward monochrome, with the glazing offering hints of blue-gray at certain times of day. This makes the 220,000-square-foot Hunt Library stand out around the Centennial Campus Academic Oval. "It seems like an arc of the imagination floating through this sea of brick," says Snøhetta founding principal Craig Dykers, AIA. The building's angled form also funnels axial views from the academic green toward nearby Lake Raleigh.

Along the building's north façade, stepped berms disguise the 16-foot grade change between the Oval and adjacent facilities downhill. Entering the library from the lower level, visitors immediately encounter Robot Alley, where they can watch the BookBot—as the school has affectionately named its 2-million-volume automated storage and retrieval system—in action. An adjacent, vivid yellow stair leads up to the library's main lobby on the second level.

The library shares the double-height lobby with a think-tank called the Institute for Emerging Issues. The space gives way to a triple-height reading lounge with an east-facing panoramic view over a rain-collecting rock garden and the Oval. A quiet reading room beyond is lined with glazed group

study rooms that overlook the double-height space from the third floor. Visitors have their choice of color-coded vertical circulation paths to move between levels: Vibrant yellow stairways trace through the library, while elevator banks are a more subdued aubergine.

In this digital-first era, a new library can raise eyebrows for those who think that print media—and the buildings that house them—are becoming antiquated, but the Hunt Library is not a place for dust to settle on books. Instead, it aims to be a lively hub where students can interact with new technologies. "We knew very early on that this was more a research and collaborative space than a traditional library," says Snøhetta project manager Nicholas Rader. "The university wanted something that showed NC State was forward-thinking in keeping up with the pace of technology and providing an opportunity not only to the students, but to the whole state."

To that end, adaptable spaces for creative work are central to the new facility. Budget cutbacks forced Snøhetta (working with local architect Pearce Brinkley Cease + Lee, which has since merged with Clark Nexsen), to eliminate a planned sixth floor. So the design team pushed the BookBot below grade, which opened the remaining upper floors to be used for a visualization lab and a creativity studio for projected digital environments, which share a small workshop boasting two 3D printers, a 3D scanner, and a laser cutter. "It's a technology sandbox for the campus," says Maurice York, the head of IT for NC State's libraries. "We're at a point where a library isn't just about text anymore. We wanted to put technology into the students' hands and see what they could do."

The university had requested an iconic building from Snøhetta to showcase all of these technologies. But, Dykers asks, "What does iconic mean? It used to mean something sculptural," he says. "From our perspective, society is past that stage of understanding." He calls the Hunt Library "more of a social monument, so that what you do in it becomes more of a memory than the building itself."

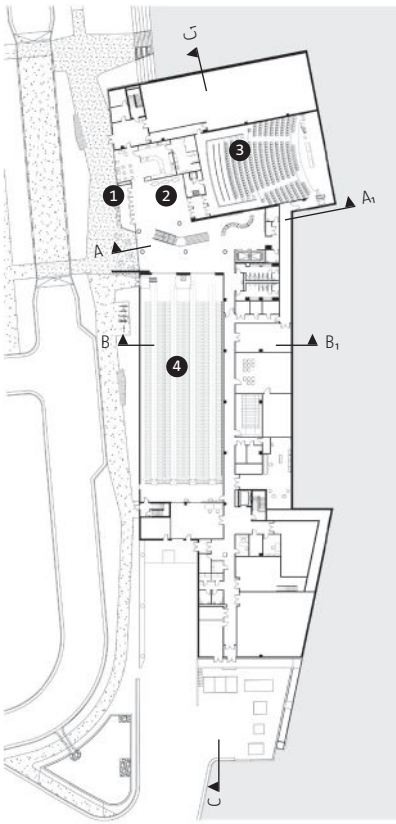
Previous Spread: Landscaping along the north façade provides a venue for shaded, outdoor learning, as well as connections between the Academic Oval at the top of the site, and the facilities downhill opposite the library's west entrance. **Above:** A trellis marking the library's main entrance on the east façade echoes the patterns of vertical aluminum louver deployment along the east- and west-facing elevations.

Horizontal louvers shade the south-facing reading rooms and the fifth-floor terrace, all of which have views of Lake Raleigh to the south.

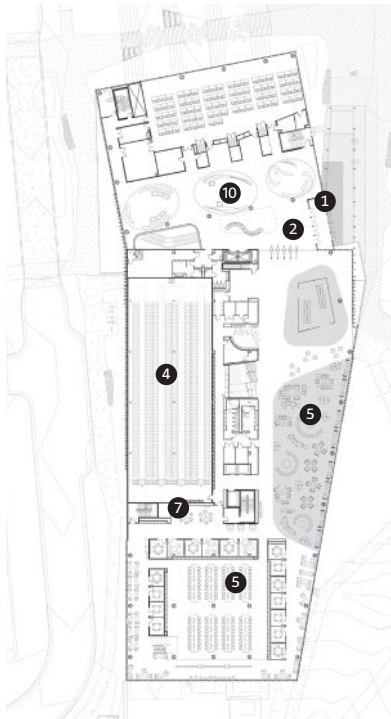
Site Plan

1. Centennial Campus Academic Oval
2. Bioretention ponds
3. Town green
4. East entry plaza
5. West entry plaza
6. Library

Ground-Floor Plan



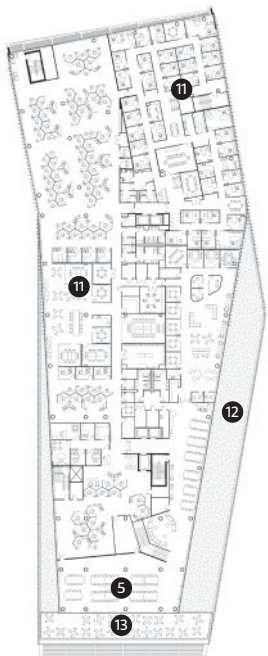
Main-Level Plan



Third-Floor Plan

Fourth-Floor Plan

Fifth-Floor Plan



1. Entrance
2. Lobby
3. Auditorium
4. BookBot
5. Reading lounge
6. Learning commons
7. Group study rooms
8. Creativity studio
9. Visualization lab
10. Institute for Emerging Issues
11. Offices
12. Green roof
13. Terrace

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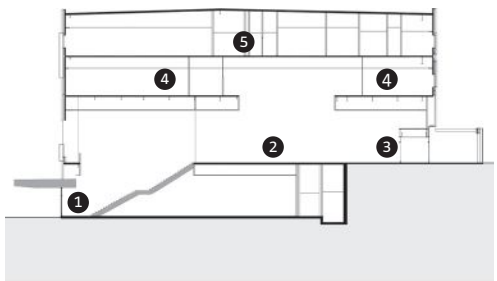
Section A–A₁



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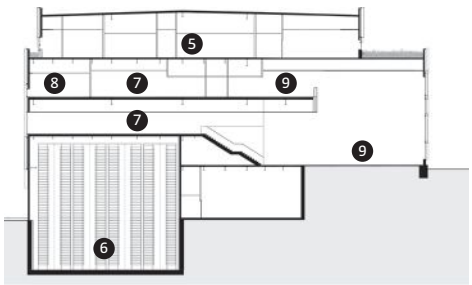
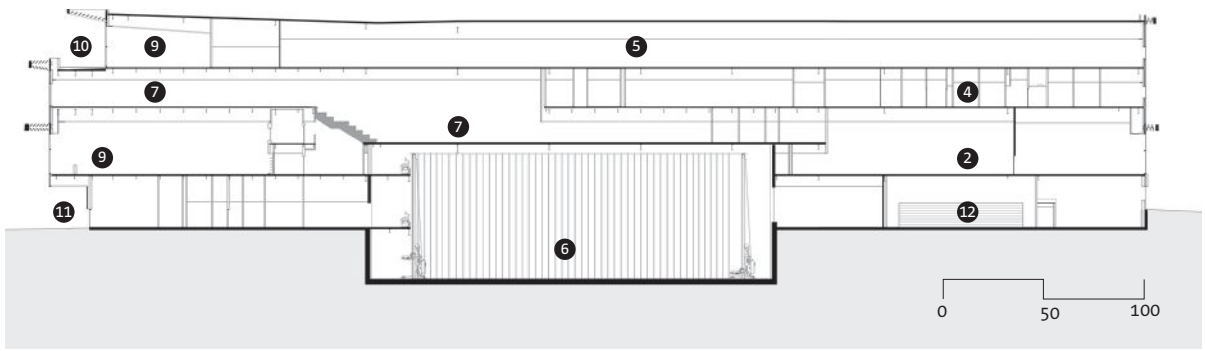


Section C–C₁



1. West entrance
2. Lobby
3. East entrance
4. Institute for Emerging Issues
5. Offices
6. BookBot
7. Learning commons
8. Creativity studio
9. Reading lounge
10. Terrace
11. Loading dock
12. Auditorium

Opposite: The BookBot allows access to 2 million volumes in one-ninth of the space required by conventional library stacks. **This image:** Yellow stairways, such as this one leading from the ground-floor entrance to the main lobby, incorporate light fixtures on their undersides.

A collection of more than 60 types of designer furnishings, selected by library staff, is arranged by type around the reading rooms; Arne Jacobsen egg chairs populate the Rain Garden Reading Lounge (pictured), and Züco's Perillo chairs line the fourth-floor balcony above. Benches built into the staircase, fitted with outlets, serve as impromptu meeting areas.

Top: The Rain Garden Reading Lounge receives ample daylight through the vertical louvers on its east-facing façade, while allowing views outward to the southern end of the Academic Oval. **Above:** The creativity studio allows students to explore digitally projected environments; a ceiling-mounted system of movable partitions, as well as theatrical lights and projectors, allow for the space to be reconfigured. **Opposite:** The Quiet Reading Room is separated from group study spaces by shelving. A yellow stair leads to more study rooms that overlook the double-height space from the third floor.

TURN TO PAGE 171 FOR ALL OF THE 2013 AIA HONOR AWARD WINNERS

Firm Award and Gold Medal

(advisory jury) **Elizabeth Chu Richter, FAIA (chair)** Richter Architects, Corpus Christi, Texas; **Norman Foster, Hon. FAIA** Foster + Partners, London; **Marlene S. Imirzian, AIA** Marlene Imirzian & Associates Architects, Phoenix; **Beverly J. Prior, FAIA** HMC + Beverly Prior Architects, San Francisco; **William D. Sturm, AIA** Serena Sturm Architects, Chicago; **Carole C. Wedge, FAIA** Shepley Bulfinch Richardson & Abbott, Boston; **David G. Woodcock, FAIA** College Station, Texas; **David Zach** David Zach, Futurist, Milwaukee

Associates, Collaborative Achievement, Kemper, Thomas Jefferson, and Whitney Young

Steven Spurlock, FAIA (chair) Wnuck Spurlock Architecture, Washington, D.C.; **James Binkley, FAIA** Reston, Va.; **Brian F. Cavanaugh, AIA** Architecture Building Culture, Portland, Ore.; **Aisha Densmore-Bey, Assoc. AIA** Aisha Densmore-Bey, Designer, Boston **Lonnie Hoogeboom, AIA** Houston Downtown Management District, Houston

Topaz

Glen S. LeRoy, FAIA (chair) Lawrence Technological University, Southfield, Mich.; **Matthew Anthony Barstow, Assoc. AIA** University of New Mexico, Albuquerque, N.M.; **Gregory A. Kessler, AIA** Washington State University, Pullman, Wash.; **Adele Naudé Santos, FAIA** Massachusetts Institute of Technology, Cambridge, Mass.

Architecture

Mary Katherine (Mary Kay) Lanzillotta, FAIA (chair) Hartman-Cox Architects, Washington, D.C.; **Brian Fitzsimmons, AIA** Fitzsimmons Architects, Oklahoma City; **John Kane, FAIA** Architekton, Tempe, Ariz.; **William Leddy, FAIA** Leddy Maytum Stacy Architects, San Francisco; **Philip Loheed, AIA** BTA Architects, Cambridge, Mass.; **Robert Maschke, AIA** Robert Maschke Architects, Cleveland; **Douglas L. Milburn, Assoc. AIA** Isaksen Glerum Wachter Urbana, Ill.; **Becky Joyce Yannes, AIAS** Drexel University, Philadelphia

Interior Architecture

Andrew Wells, FAIA (chair) Dake Wells Architecture, Springfield, Miss.; **Susan H. Jones, FAIA** Atelierjones, Seattle; **Carlos M. Martinez, AIA** Gensler, Chicago; **Ronald J. McCoy, FAIA** Princeton University, Princeton, N.J.; **Catherine M. Truman, AIA** Ann Beha Architects, Boston

Regional & Urban Design

Mark Shapiro, AIA, (chair) Mithun, Seattle; **Ellen Dunham-Jones, AIA** Georgia Institute of Technology, Atlanta; **William A. Gilchrist, FAIA** Place Based Planning, New Orleans; **Toni L. Griffin, AIA** City College of New York, New York; **Thomas E. Luebke, FAIA** U.S. Commission of Fine Arts, Washington, D.C.

Young Architects

Norman L. Koonce, FAIA (chair) McLean, Va.; **Albert W. Rubeling, FAIA** Rubeling & Associates, Towson, Md.; **Ronald L. Skaggs, FAIA** HKS, Dallas; **John Sorrenti, FAIA** JRS Architect, Mineola, N.Y.; **William J. Stanley III, FAIA** Stanley Love-Stanley, Atlanta

Project Credits

Newbern Town Hall, PAGE 258

Project Newbern Town Hall, Newbern, Ala.
Client Mayor Woody Stokes, the town council, and the town of Newbern
Architect Rural Studio, Auburn University, Newbern, Ala.—Richard Hudgens, AIA (architect of record); David Frazier, Mallory Garrett, Brett Bowers, Zane Morgan (student design/build team); Andrew Freear, Richard Hudgens, AIA, Danny Wicke, Mackenzie Stagg (faculty team)
Environmental Consultant Atelier Ten—Paul Stoller
Structural Engineer GFGR—Joe Farruggia
Architecture & Landscape Xavier Vendrell Studio—Xavier Vendrell
Architectural Detailing Wheeler Kearns Architects—Dan Wheeler, FAIA
Lighting Consultant Atelier Ten—Meghan Smith-Campbell
Specialist Metal Fabrication Metal Inc.—Lauren Danley
Size 1,909 square feet
Cost Withheld

Material and Sources

Adhesives, Coatings, and Sealants Emseal *emseal.com*
Appliances Haier (refrigerator) *haier.com*; Samsung (range) *samsung.com*
Concrete River City Industries, Demopolis, Ala.
Exterior Wall Systems Plantation Cypress, Dothan, Ala. (8"-by-8" old-growth Bald Cypress supplier)
Fabrics and Finishes Drywall, painted white (interior walls and ceilings); steel angles (window frames); finished concrete slab (floor); steel tubing (trusses)
Flooring Cedar Ridge Excavating, Newbern, Ala.
Furniture Custom, fabricated by team (conference table); CB2 (chairs) *cb2.com*
Glass Ace Glass *aceglassinc.com*
HVAC LG Electronics *lg.com*
Insulation Johns Manville (ceiling batt insulation) *jm.com*; Pactiv (foundation) *greenguard.pactiv.com*
Lighting Cooper Lighting *cooperindustries.com* (fluorescent); custom baffles fabricated by team; Hampton Bay (pendants) *lightinghamptonbay.com*
Masonry and Stone Jenkins Brick (barbecue pit) *jenkinsbrick.com*
Metal Cain Steel *cainsteel.com*; McNichols (expanded metal) *mcnichols.com*; Turnipseed International *turnipseed.biz*
Roofing Sloan Supply *sloansupply.com*
Site and Landscape Products L'Hoist North America (gravel) *lhoist.us*
Structural System Load-bearing cypress timber walls, stacked horizontally, fastened together with continuous threaded rods. The roof is comprised of 43 king-post-style trusses made of 1½"-by-1½" steel tubing
Windows, Curtainwalls, and Doors Kawneer North America (doors) *kawneer.com*

Samsung Model Home Gallery, PAGE 266

Project Model Home Gallery, Seoul, South Korea
Client Samsung Corp.
Architect NADAAA, Boston—Nader Tehrani, Katie Faulkner, AIA (principals in charge); Kevin Lee (project coordinator); Dan Gallagher, Ellee Lee, Richard Lee, John Houser, Ryan Murphy, Samuel Jacobson, Tom Beresford, Tim Wong, AIA (project team)
Local Architect AandD
Mechanical and Electrical Engineer Chungwoo Engineering
Structural Engineer Yunwoo Structural
Civil Engineer Daegyo
Landscape Architect Dongshimwon
Lighting Taewon Electrical
Exterior Woojung
Curtainwall Daemuyng Gunyoung
Energy Consultant Gunhwan
Traffic Consultant KTS
Exhibition A Works
Cost Estimator Shinhwa Interior
Size 105,000 square feet
Cost Withheld

Bausch and Lomb Poland Headquarters Office, PAGE 278

Project Bausch and Lomb Poland Headquarters Office, Warsaw, Poland
Client Bausch and Lomb Polska
Architect 137kilo Architects, Warsaw, Poland—Jan Sukiennik (licensed architect, team leader); Bartłomiej Popiela (architect, project leader); Beza Projekt, Warsaw, Poland—Anna Łoskiewicz, Zofia Strumiłło-Sukiennik (designers and team leaders); Krzysztof Benke, Alicja Getka, Robert Kłoś, Tomasz Korzewski (collaborators)
Structural Engineer Robert Luszczynski
Project Management Maas Projekt—Piotr Flis
General Contractor Art Servis
Lighting Designer Candlelux
Wall Graphics Tymek Jezierski
Photography Jacek Kołodziejski
Size 550 square meters (6,000 square feet)
Cost Withheld

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Project Credits

Material and Sources

Inflatable Domes Inflate UK *inflate.co.uk*
Green Walls Uroczysko Poland *zielone-sciany.pl*
Office Furniture Balma *balma.com.pl*
Office Chairs Sitag *sitag.pl*
Custom Furniture Beza Projekt *bezaprojekt.pl*
Lighting Candlelux *candelux.pl*

Exploratorium at Pier 15, PAGE 284

Project Exploratorium at Pier 15, San Francisco
Client Exploratorium
Architect EHDD, San Francisco—Marc L'Italien, FAIA (design principal); Charles M. Davis, FAIA (principal in charge); Rick Feldman, AIA (project manager); Tara Ogle, Assoc. AIA (construction administration/design); Shani Krevsky, AIA (project architect, exterior); Michelle Hill, AIA (project architect, interior); Lotte Kaefer, AIA (project architect, observatory); Matthew Rouse (concept design); Elise Seingier (concept design, construction administration); Cesar Duarte, Daniel Maxfield, David Hurley, AIA, David Seidel, Denise Zuniga, Elizabeth Rajala, Emily Bello, Assoc. AIA, Gloria Lee, Glennis Briggs, AIA, Hope Mitnick, Janika McFeely, Assoc. AIA, Jessica Rothschild, AIA, Johanna Hauser, John Christiansen, Kate Tans, Katherine Miller, AIA, Kelly Sloan, AIA, Lindsay A. Furlong, AIA, Margo Majewska, Noreen Hughes, Rika Kurihara, Samantha Lautman, Samee Sheikh, Sid Conn, Sijing Sanchez, AIA (project team)
Mechanical Engineer Integral Group
Structural Engineer Rutherford and Chekene
Electrical Engineer Cammisa and Wipf
Civil Engineer Kennedy/Jenks
Geotechnical Engineer Treadwell and Rollo
Construction Managers Wilson Meany Sullivan
General Contractor Nibbi Brothers General Contractors
Landscape Architect GLS Landscape Architecture
Lighting Designer David Nelson & Associates
Telecommunications Teladata
Acoustical Consultant Charles M. Salter Associates
Food Service Consultant The Marshall Associates
Elevators Van Deusen & Associates
Laboratory Cannon Design
Historical Preservation Page & Turnbull
Theater Consultant The Shalleck Collaborative
Code Consultant The Fire Consultants, Holmes Fire
Environmental Review EIP Associates
Environmental Due Diligence Tetra Tech
Wayfinding/Signage Experience Design—Bill Hill, JKeppel.Creative Strategies
Security Consultant Security By Design
Cost Estimator Oppenheim Lewis
Size 330,000 square feet
Cost $300 million capital campaign

Material and Sources

Adhesives, Coatings, and Sealants Dow Corning *dowcorning.com*; Sika *usa.sika.com*
Carpet Tandus Flooring *tandus.com*
Ceilings Armstrong *armstrong.com*; Eurospan *eurospanstretchsystems.com*;

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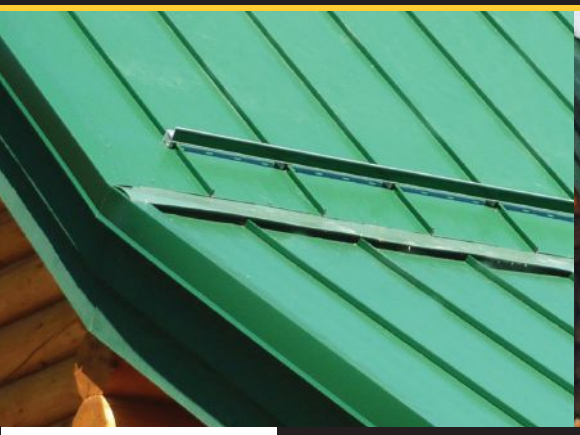

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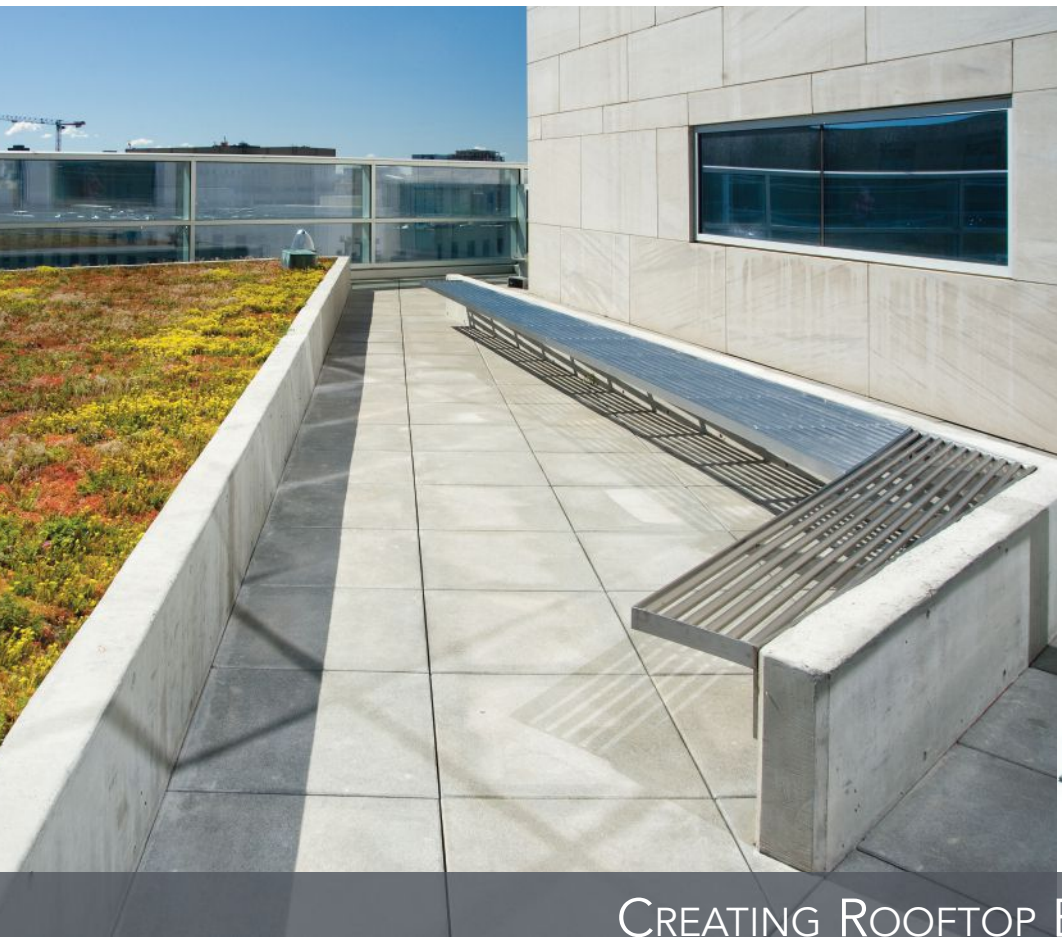

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Concrete Scofield *scofield.com*
Furniture Teknion *teknion.com*
Glass Bendheim *bendheim.com*; Viracon *viracon.com*
Gypsum USG *usg.com*
Insulation Knauf *knaufinsulation.us*; Owens Corning *owenscorning.com*
Lighting Borden *bordenlighting.com*; We'ef *weef.de*; Zumtobel *zumtobel.us*
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Plumbing and Water System American Standard *americanstandard-us.com*; Elkay *elkay.com*
Roofing Johns Manville *jm.com*; Siplast *siplast.com*
Seating Forms + Surfaces *forms-surfaces.com*
Structural System AMT Metal Fabricators *amtmetals.com*
Walls Gallina USA *gallinausa.com*; Hufcor *hufcor.com*
Wayfinding Thomas Swan *thomasswan.com*

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James B. Hunt Jr. Library, PAGE 294

Project James B. Hunt Jr. Library, Raleigh, N.C.
Client North Carolina State University
Architect Snøhetta, New York—Craig Dykers, AIA (partner in charge); Elaine Molinar, AIA, Nic Rader, Fred Holt, Jon Kontuly, Misako Murata, Maura Rockcastle
Executive Architect Clark Nexsen (formerly Pearce Brinkley Cease + Lee), Raleigh, N.C.—Clymer Cease, AIA (partner in charge); Donna Francis, AIA, Doug Brinkley, FAIA, Shann Rushing, AIA, Ryan Johnson, Katelyn Ottaway
M/E/P/F Engineer Affiliated Engineers
Structural Engineer Stewart Engineering
Civil Engineer Cole Jenest Stone
Construction Manager Skanska
Landscape Architect Snøhetta
Executive Landscape Architect Susan Hatchell Landscape Architecture
Lighting Designer Pivotal
Programming DEGW
Cost Consultant Davis Langdon
LEED Administration Clark Nexsen (formerly Pearce Brinkley Cease + Lee)
Structural Consultant Arup
Audiovisual/IT/Acoustics Sextant Group
Furniture NCSU Libraries, Clark Nexsen (formerly Pearce Brinkley Cease +Lee) with Another Inside Job
Library Collection Capacity More than 2 million volumes
Size 264,000 square feet (24,526 square meters)
Cost $73 million

Material and Sources

Automated Book Delivery System Dematic *dematic.com*
Concrete Blair Concrete *donleysconcrete.com*
Curtainwall, Glass, and Metal Panels Trainor Glass
Electrical T&H Electric *thelectrical.net*
Mechanical John J. Kirlin *jjkllc.com*
Miscellaneous Steel Smith Architectural Metals *smithmetals.net*
Structural Steel CMC South Carolina Steel *cmc.com*

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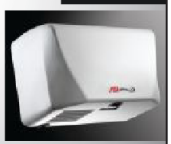

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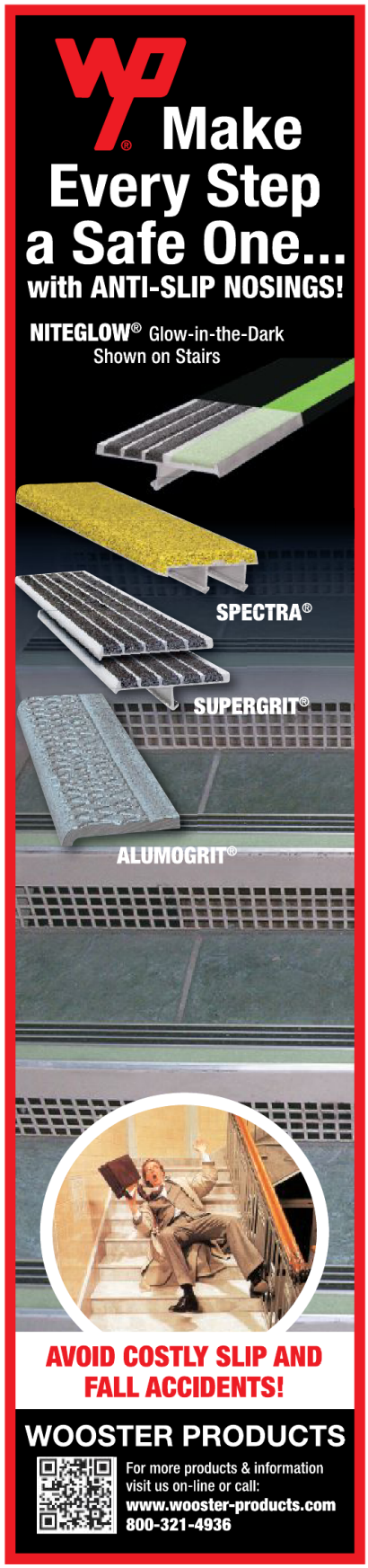

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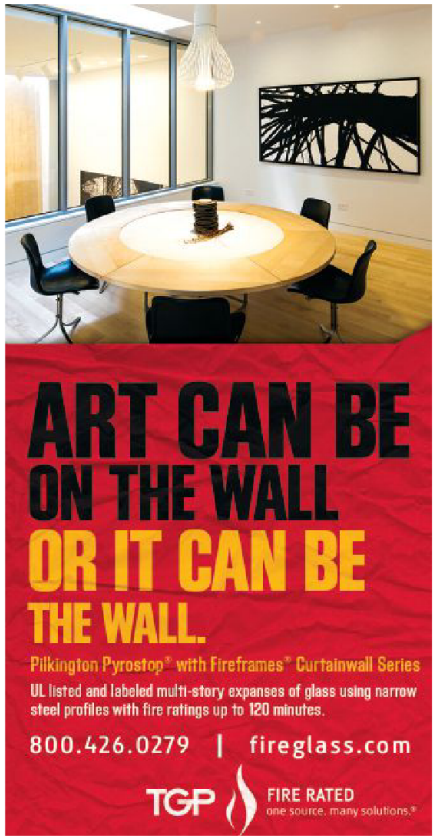

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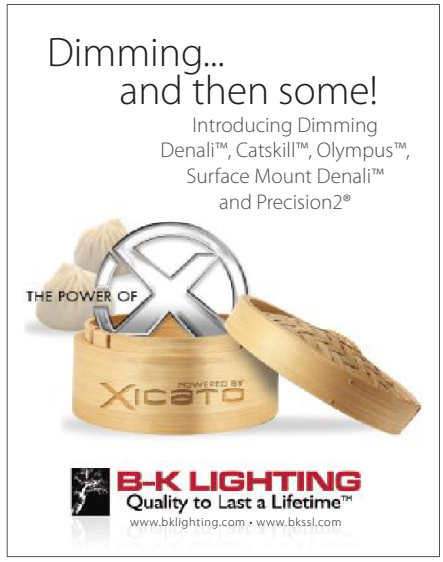

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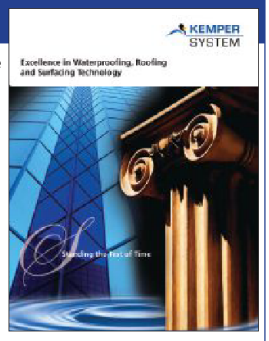

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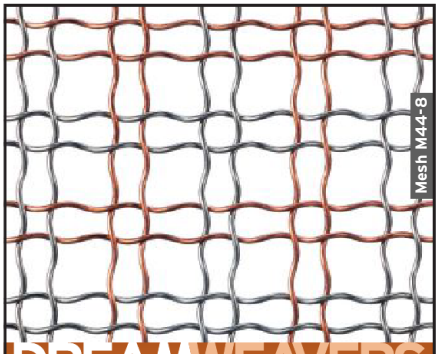

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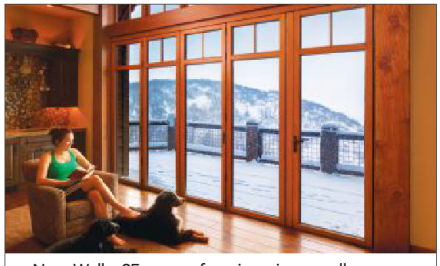

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1958 P/A AWARD CITATION

The Fountain of Youth

THE WARM MINERAL SPRINGS MOTEL NEAR VENICE, FLA., CAPTURES THE OPTIMISTIC AND FANTASTIC QUALITY OF VICTOR LUNDY'S EARLY WORK.

Text by **Thomas Fisher, Assoc. AIA**

JURY

1958 P/A Awards Jury
Félix Candela
Arthur Davis
Henry Kamphoefner
Carl Koch
I.M. Pei, FAIA

MODERNIST ARCHITECTURE, with its ample glass walls and flow of inside–outside space, seems made for warm weather, and few post–World War II architects have explored the possibilities of a mild climate more than Victor Lundy, FAIA. His Warm Mineral Springs Motel near Venice, Fla., cited in the 1958 P/A Awards program, blurs the boundaries between interior and exterior to an extent rarely seen before.

The U-shaped motel has a series of single-loaded rooms, entered from perimeter parking and overlooking a lushly planted courtyard. Above the rooms stand 14-foot-square, precast-concrete hyperbolic-paraboloid roofs that alternate in height. As originally constructed according to Lundy's design, Plexiglas clerestories made the roofs appear to float, especially at night, with their undersides illuminated from within. "Designed to stop traffic," Lundy said, the inverted roofs evoked the "fountain of youth" of the nearby warm mineral springs.

Lundy used the different-height roofs to define various functions in each suite: lower ceilings above the entrance, beds, and dining area, and higher ceilings above the bathroom, sitting area, and kitchenette. Sliding glass doors connect each room to the courtyard, with vertically stacked concrete bricks, originally painted charcoal gray, enclosing the rooms. A suspended air-conditioner in each room dripped condensate into an interior planter bed, further blurring the distinction between inside and out.

Solid panels have since replaced the Plexiglas, through-the-wall air conditioners now cool the rooms, and the once-gray walls are white. But the inventiveness of Lundy's motel still stops traffic, designed as it was by one of America's most underappreciated postwar architects.

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